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VERMONT

MEDICAL JOURNAL.

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Edited and published by JOHN M. CURRIER, M. D., Surgeon-General of Vermont.

Burlington, Vermont, December 25, 1873.

VERMONT

MEDICAL JOURNAL.

Vol. I. JANUARY, 1874. No. I.

Gastric Fever, as it has occured in Caledonia County, Vermont, in the years 1871–2–3.—*Report of a typical case.—By G. B. Bullard, M. D., St. Johnsbury, Vermont.*

An endemic has prevailed in Caledonia county and the adjoining towns, the past three years, somewhat peculiar in its nature, and so much unlike any of the well described forms of continued fever that I propose to speak of it somewhat in detail. By some it is considered a new and distinct form of pyrexia, by others a peculiar modification of a well described disease. This I will leave for others to form their own opinions upon, after having given a faithful description of the disease.

This fever first appeared in this town and hereabouts something over two years since, but showed itself in its worst form in the months of August, September and Oc-

tober 1872. but continues until the present time, the wife of a neighboring physician being in a very critical condition at this writing. To give a more clear conception of the type of fever I will give the condensed history from my note book of what I regard as a typical case :—

Summoned to see Mrs. M., of St. Johnsbury on the morning of December 2nd, 1871 ; aged 34 ; the history given was as follows :—From three to four weeks previous had much languor with gradual loss of apetite. six weeks previous had taken child from breast at ten months of age ; a dull headache had come on in the latter part of the day for three or four weeks. In short the usual symptoms of the incubative stage of typhoid fever had seemed to be present. On the night of December 1st, a slight chill had come on followed by severe vomiting which continued on my arrival. Found the pulse 60, temperature 101.5° Fah. Constant nausea with paroxysms of vomiting every half hour. Suspected typhoid fever. Gave an enema to clear the bowels as the stomach could bear no aperient. Ice was prescribed for gastric irritability, which was grateful for a few hours, when even this could not be retained. Small doses of morphine and hydrocyanic acid were given with no better results. A blister upon the epigastrium on the second day with no apparent effect. Temperature second day, 101° Fah. The above symptoms and temperature continued until the 10th day, when the vomiting began to decrease in frequency.

From the 10th to the 16th day temperature came to 100° Fah. Various kinds of nourishing liquids, such as rice water, corn coffee, bread coffee and beef tea were tried but nothing was retained, but rather served to increase the terribly distressing nausea until nothing was given by the stomach either as food or medicine. Anodynes had been administered by enema to procure what little rest had been obtained. Strong beef tea was now added to the anodyne (McMunn's Elix. gtts. x to xx.) to stay as much as possible the rapid invasion of debility.

Erom the 16th to the 20th day the temperature gradually fell to 99.5° Fah. Vomiting decreased to morning

and evening if nothing was taken into the stomach, and nothing to disturb the patient by noise or calling the attention. From the 26th to the 36th day nothing different occured from what is described above. Headache had all disappeared on the 6th day; bowels were moved by enema on every 4th or 5th day; dejections normal; no sordes about the teeth, tongue slightly furred, at first disappearing on the 10th to the 12th day, afterwards dry and red in the center but moist on the edges. Bowels became so flat that on the 16th day could see the vertebræ the entire anterior curvature; never tympanitic; never any tenderness either over any portion of the bowels or stomach; complexion normal; expession pinched throughout. The pulse came to 84 upon the subsidence of vomiting and remained there from the 26th to the 36th day. Soon after the 36th day, should say the 38th, a slight dull headache was present which continued throughout the remainder of the sickness, being more severe in the forenoon. The mind was clear throughout, though as debility increased it was sluggish, hesitating sometime before answering but always answering correctly.

Upon the 44th day the patient complained of the room being too dark yet the same light as usual was in the room. On the 46th day could not distinguish the features of friends. Upon the 54th day saw a picture double at the foot of the bed, which was hanging upon the wall. Upon the 56th day saw everything double, which was so disagreeable to her that she wished the room darkened, and kept her eyes closed. On the 58th day it was found upon lighting the room and making the proper tests that nothing could be seen. The pupil of the eye appeared normal and responded readily to light during the entire sickness up to 56th day. Upon the 60th day the patient died, with no change from the 59th, but gradually "went out."

Autopsy 36 hours after death. No rigor mortis; very great emaciation, almost no trace of adipose tissue anywhere to be found. Lungs and heart normal. Stomach contracted to one half its normal capacity; contained four

fluid ounces of vitiated bile, of an alkaline reaction; mucous membrane softer than normal and could be easily scraped from the muscular coat; presented near the pyloric orifice a congested appearance, more resembling the arborescent appearance commonly shown in the drunkard's stomach; a thickened and partially hardened appearance of the membrane at this point; the other coats of the stomach were normal. The mucous membrane of the duodenum was hyperæmic, and presenting throughout much the same appearance as near the pyloric orifice of the stomach; the same appearance fades out in the ileum and jejunum. Colon and rectum normal. Kidneys healthy. Liver highly congested throughout; a small point of apparent inflammation at the transverse fissure; about one half teaspoonful of pus and mucus in the hepatic and choledoch ducts. Brain normal. Spinal cord not examined.

The late lamented Dr. D. M. Merrill, formerly of this town, aided me much in the treatment of this case, and assisted me in the autopsy. To him am I indebted for the notes here given of the post-mortem examination, he having given them to me but a few days before his untimely death.

Thus have I given as concisely as possible what I consider a typical case of the fatal form of this disease. In describing this case not all, nor but a small portion, is said that I might, and wish, to say in reference to the varying forms of the disease. Fortunately few patients are so utterly hopeless as this one. I have never known however a recovery after vision became impaired to a degree beyond slight dimness.

The duration of the disease fully established is never less than four weeks, and life can hardly hold out more than eight, unless we get a favorable line of symptoms, which we usually do in from four to six weeks, but months come before health is fully established, with varying and distressing symptoms, the two leading of which are difficulty in taking food, and long continued muscular pains, especially in the limbs. The disease more likely attacks the weak, infirm, over-worked, the poorly fed and

clothed, sickly, and especially those women who have been reduced in the care and nursing of children. Women are very much more likely to have it than men, very few of the latter compared to the former; the middle aged and old much more than the young children; the latter rarely if ever. Age increases the danger.

That it is a zymotic disease I have no doubt, and that it is a pyrexia I am positive. That it may have prevailed in some portions of the county before may be, but never here. It certainly has never been well described in any work upon fevers that I am able to find. Post-mortems show it not to be an inflammation of any of the viscera, and it has not the history of inflammations, nor its temperature, nor has it the history, temperature, tympanitis, diarrhea, delerium, subsultus tendinum, nor sordes of typhoid fever. Neither has it the inflammation and ulceration of Peyer's and Brunner's glands, which characterizes this fever from all other forms of continued fever.

What it shall be called, or is called by others, or what its appropriate name is I cannot say. "I am sure it is a fever or a form of some fever not yet well described in any books treating upon the subject," says an eminent medical man who has seen much of the disease, in writing me upon the subject.

The disease has drifted into the name of "gastric or gastro-enteric fever" in this town, but out of this town it takes the name of "the St. Johnsbury fever," by the laymen. It is deemed by some whose opinions, perhaps, ought to be treated with respect, that there is no such fever as gastric. By reference to Niemeyer, we see he recognizes and describes such a fever. In the report on fever, the Prussian War Bureau in summing up the causes of death during the late Franco-Prussian War, gastric fever is next to small-pox in cause of death.

My eye fell upon the report of the Board of Health of London for 1872, a few days since, and I find that gastric fever is placed as the cause of a large number of deaths. An eminent Boston physician, whose name is familiar to all New England physicians, and does a large consul-

tation business, has often seen the disease within the past year, and expresses himself as satisfied with the name of gastric fever. It is understood by the people in this vicinity, and this is at least a reason why it is well to keep the name here, but I care not what it is called, provided the conditions are understood.

Diphtheria.—Its prevalence as an epidemic in New England in the years 1861–2.—*Also observations on its pathology and treatment.—By A. T. Woodward, M. D., Brandon, Vermont.*

It is some twelve years since diphtheria prevailed very extensively as an epidemic through New England. I think every state within that territory was visited to a greater or less extent, nor was the visitation confined to a single year. In many sections the disease protracted itself for two or more years; and ever since, it has very often, after a varible period of repose, cropped out sporadically. When the alarm was first given in this section, physicians consulted the best authorities for information in regard to the nature of the disease and the most approved methods for the management and control of the same. Unfortunately the accumulated knowledge of the disease was very meagre and altogether unreliable. The oldest living members of the profession had had but little or no experience in the disease, the text books were almost silent on the subject, and about all that was then known concerning the nature and cure of the epidemic was purely conjectural on the part of those who suddenly bethought that they had surely seen sporadic cases of the disease.

The treatment that was early proposed by some of the leading men in the profession was based entirely upon

theoretical ground which had not been sanctioned and fortified by bed-side experience. I think I am correct in stating that when the old theories are still held to, it may be explained on the ground that it is no easy task to turn the back upon old friends. When we reflect that the early theories of the nature and treatment of diphtheria, were emanations from the matured minds in the profession, it is not very strange that many clever men still adhere to them, notwithstanding the attendant great mortality.

I distinctly remember the idea I had formed, and carried to my first case, of the disease and its treatment. The supporting treatment, whiskey, quinine, chlorate of potash, were the armament which was to sustain the fight on our side, a disease which prostrated the powers of life to an alarming extent, and at a very early period in the attack was the enemy to be overcome. I had not received my first lesson in the croupal form of the disease, therefore was not a little surprised to find the patient dying (she had been under treatment already one week), of croup. I asked myself if death approached in that way in all the cases; if not, in what proportion of cases can it be looked for? I certainly could not answer the question, but this case surely placed the fear of death from extension of the disease and formation of the membrane in the trachea anxiously before me; and I resolved if I ever was called to treat a case to resort to the remedy upon which I had always safely relied in inflammatory croup, namely: calomel.

The next case to which I was called was the sister of the dying lady who had kept watch by the sister till she died. I then thought the attack a very severe one, and subsequent experience confirmed the impression. She was confined to her bed with a high fever. The uvula was swollen and elongated, covered with the patches which extended upon the soft palate down both curtains and over the tonsils. I prescribed whiskey and quinine and chlorate of potash, also one half grain of calomel with one fourth of a grain of pulverized opium, every hour. I found it necessary to continue the treatment

about sixty hours; at the expiraton of that time the fever abated, and the patches ceased to extend, convalescence followed directly, uninfluenced by the stimulants and tonics which were continued several days after the calomel had been discontinued. This was the first recovery up to this date in this vicinity. The patient lived high up in the mountains to the south of our village, and all the cases thus far had appeared at this elevation.

A few days after this case had recovered, case after case came under observation. The epidemic seemed to take a regular course downward toward the valley of the Otter Creek, attacking one or more members of almost every family on the road, and in regular order, till the valley was reached, then it extended in every direction. The seven subsequent cases that I saw I treated in like manner with good results, all recovering, and as I failed to see any very marked degree of prostration in any of the patients such as I had been previously led to consider would attend upon them, I resolved to try the efficacy of quinine, chlorate of potash, calomel and opium alone, the whiskey was discontinued in the treatment of the next seven cases, with like favorable results, still there was no visible prostration beyond that degree which always attends upon acute disease of a few days duration. In my subsequent treatment the quinine and chlorate of potash were excluded altogether, and my whole reliance was placed on calomel, the opium acting only to prevent the calomel operating on the bowels.

I saw many cases in consultation late in the disease, which proved fatal, but none when the calomel had been used early and faithfully, and I mean by faithfully, to be understood that the medicine was used continuously till the fever abated, or the approach of ptyalism was apparent, in as large doses as could be borne without accelerating the action of the bowels, and the doses repeated every hour. I felt that the first twenty-four hours were very important in the treatment, for when they were given to the treatment the system would become charged with the mercury at an early period, and before the inflammation could possibly extend to the trachea, or interfere

materially with the functions of the great sympathetic nerve. Death often followed the use of a full cathartic dose of calomel, and for obvious reasons it seems to me. My object in administering calomel was twofold, of which I shall presently write. In the first place let me observe that I am well persuaded that death in diphtheria takes place almost invariably by asphyxia, which is either the result of an extension of the inflammation into the trachea, and the formation of the false membrane as in croup, or the disease confining itself to limits outside the trachea, so influences that portion of the great sympathetic nerve, whose office it is to preside over that function of the lungs, which effects the interchange of oxygen of the atmosphere for the carbon of the blood, as to paralyze its action.

I think any person who has watched faithfully by the bed of those dying of diphtheria, must have seen cases of indisputable asphyxia, when the trachea was as free from disease as it is in health, not a respiratory sound, nor a cough, nor a spoken word to indicate the slightest disturbance there, yet the countenance would be as expressive of asphyxia as it is in membranous croup. It is in this way death approaches so unexpectedly to some physicians, who not witnessing that hopeless prostration (for patients have often been seen to walk the floor a moment before death closed the scene), which they have been taught to consider the great bugbear, they have cherished a hope of safety far beyond a reasonable period.

In mercury we have an agent that will, it is thought, defibrinate the blood, I believe it, or you may account for the remedial action which it possesses in any other way, if you choose, but certain it is, it will prevent the formation of the membrane in diphtheria even when the inflammation extends into the trachea, provided the mercurial has been working in the system some hours before the inflammation reaches the trachea. This is true also of inflammatory croup, if the system can be thoroughly charged early in the disease there is very little danger that the exuded lymph will become organized. There

is this difference in the two complaints, in true croup the membrane does not usually form under twenty-four hours, whereas in diphtheritic inflammation of the trachea the membrane forms as soon as the part becomes inflamed, therefore no treatment can avail against tracheal diphtheria, provided it is established before the patient is mercurialized. I have in more than one instance seen patients recover from tracheal diphtheria when the system had been mercurialized before the inflammation fairly reached the trachea, but I should not look for any favorable result if the converse was the case.

Mercury will also prevent paralysis of the great sympathetic nerve, i. e. it will ward off that form of asphyxia which depends upon paralysis of that portion of the sympathetic which is distributed to the lungs. Some eminent men have condemned the use of mercury in blood diseases. These men could never have seen the satisfactory working of mercury in typhoid fever, when about the eighth to the twelfth day of the disease, the, as Wood explains it, "force of the disease is about to fall upon some internal organ and soften it," or they certainly would not protest against mercury in a blood disease. I think this state in typhoid fever is brought about by paralysis of that portion of the sympathetic nerve which supplies those organs, and in this way it seems to me we can explain the softening of those organs more rationally and satisfactorily than by saying that the "force of the disease had fallen upon them."

Since this epidemic, sporadic cases have fallen under my observation which have required besides the mercurial treatment a resort to stimulants, and of all of them I much prefer the carbonate of ammonia. During the epidemic resort was made to many varieties of throat washes, but I was unable to determine that the local trouble was materially benefitted by any of them. In some of the sporadic cases that have since followed I have used ice, both internally and externally, with greater relief or temporary soothing effect than any that followed the use of medicated gargles and washes. Paralysis

of the extremities was not witnessed in one instance, and paralysis of any part occured only once; this was of the muscles of the soft palate, producing a nasal twang which persisted a few weeks after health was established.

Investigations of the condition of the Insane in the Vermont Insane Asylum.—Extracts from the Commissioner's Report.—Joint Resolutions of the General Assembly.—Extracts from the Joint Committee's Report to the Governor.—Extracts from the Superintendent's Biennial Report to the Governor, August 1872.—Remarks by John M. Currier, M. D., Burlington, Vermont.

In laying before the readers of this Journal the results of the investigations concerning the condition of the insane in the Vermont Insane Asylum we extract quite largely from the various officers' reports; and shall make such extracts only, as shall pertain to the history of that institution, and to its standing as an asylum for the insane, without any desire to shield the former superintendents from any just blame that may fall upon them, in consequence of negligence of duty, or willful maltreatment that they may have instituted in the management of those under their care. Nor do we wish to pass by unnoticed the shade of coloring given in the report of the joint committee to the governor last June.

It is our object in thus bringing prominently before the profession of our state to instill into their minds some interest in the welfare of this class of patients, and, also, to acquaint them of the workings of our asylum. Every physician in the state is liable to be called upon to treat cases of insanity, and it is almost the invariable rule to

send them to an asylum, where they can or should receive more appropriate treatment than in any family; hence it is that every one should know the character of the place to which he is sending his patients. It appears that Dr. Bullard, then superintendent to the insane, made several visits to the asylum at Brattleboro, and made searching examination as to the condition of things throughout, and about the same time visited several other insane asylums in New England for the purpose of comparison; the results will be better shown in the language used in the

Commissioner's Report.—"In 1835 Mrs. Anna Marsh, of Hinesdale, N. H., gave $10.000 to establish an asylum for the insane, at Brattleboro, Vt.; and the same year the State by the act of their legislature gave $10.000, to be paid in five annual installments of $2.000 each. In 1836 the State granted an additional $2.000. In 1837, $4.000. In 1840, two annual installments of $2.000. In 1843, $3.000. In all, $23.000; all of the above for building purposes.

"In 1862 the center building and wings of the Institution were burned. It was immediately rebuilt, and again occupied in 1864. The expense of rebuilding was about $40.000. The whole cost of the Institution at the present time, including twelve hundred acres of land, is $234.870, in which amount the State has an interest of $23.000.

"This Institution is owned and governed by a corporation, the trustees of which are Asa Keyes, N. B. Williston, Frederick Holbrook and Daniel Kellogg. By the acts of 1840–43, the corporation own the property, and if it ceases to be an insane asylum the State have simply a lien upon this property for the security of the $23.000 heretofore invested.

"In 1845 the legislature made an annual appropriation of $3.000, to be divided *per capita* among the insane poor of the State, who were received at the institution. This was continued until 1846, when it was increased to $5.000, which is continued for the same purpose to the present time. The price charged the State for individuals receiving State aid, is three dollars per week.

"The only connecting link between the institution and the State, except its legislative appropriation, is by the election of a commissioner on the part of the State, who is required by law to visit the institution from time to time, and report what he may see and hear; but beyond this he has no authority to suggest or advise, as the present commissioner was informed by the superintendent of last year, though all suggestions would no doubt be kindly received.

"In the opinion of your commissioner, the insane of this institution are well cared for and kindly treated. Especially is the present superintendent untiring in his efforts to make the institution as good as possible with the means at his control; and there has been very apparent improvement in the asylum since his acquisition to the office.

"The money appropriated by the State is of very great service to this unfortunate class of persons. It is the belief that the people we serve will never tire of large appropriations for this charitable purpose. Yet I should feel that I had not fully completed my duty to this position of commissioner of the insane, did I not suggest that the State have much more interest in this institution or another of its kind. It is far behind similar institutions in our sister states, in that that it is so constructed that no ward can be ventilated according to the modern principles of ventilation.

"There are kept in a damp, dark, underground basement, from fifty to one hundred of the most hopeless and incurable persons, in a place where the atmosphere they breathe must be more or less impure, in defiance of the great care which is observed in its purification. Certainly this class of persons should have a healthful and pleasant locality in such an institution. To do this the number of persons must be decreased or the buildings enlarged. While the superintendent and assistant superintendent are untiring in their efforts in behalf of the insane of the asylum, I am confident the medical staff is too small to do justice to the large number of patients. To the mind of the commissioner the medical staff should be

sufficiently large to give ample time for the study of each and every case of insanity as it enters the institution, and continuing that study in reference to the best course to be pursued, in each case in view of a final cure."

JOINT RESOLUTIONS.—At the next session of the legislature after Dr. Bullard's report was transmitted to the governer, resolutions were passed to appoint a committee, and authorize them to investigate the condition of affairs at the Vermont Insane Asylum; we reproduce these resolutions:

"That a committee of two senators and three members of the house of representatives be appointed to visit, investigate, and make a report upon the condition of the persons confined in the Vermont Insane Asylum as insane persons, and whether any persons are now or have been confined there during the last two years as insane persons who are not or were not insane. with full power to send for persons and papers."

"That the special committee already appointed to visit and inspect the insane asylum at Brattleboro, Vermont, be authorized and instructed to visit the insane asylum at Concord, New Hampshire, for the purpose of comparing the condition and treatment of the patients in the two asylums, and the state lunatic hospital at Northampton, Massachusetts."

We must remark the injudicious selection of this committee by the legislature, viz: one *farmer*, one *merchant* and three *attorneys*, whose duties were "*to investigate the condition of the persons confined in the Vermont Insane Asylum as insane persons, and whether any persons are now or have been confined there during the last two years as insane persons who are not or were not insane.*" Were these men sufficiently skilled in psychiatry to be competent judges in the matters for which they were appointed to investigate! How little were men of such occupations prepared to judge of the conditions of the insane, of the best course of treatment, or of the best regimen to be adopted in the various cases, and above all, the most difficult thing for them to perform, to decide whether the patients were, or were not insane! Whether this committee examined each case carefully, of the 476 patients then in the asylum, or not, we are not informed

in their report; most certainly this was their duty. It must strike every intelligent physician that this appointment was a very injudicious one. Suppose each one of those legislator's wives had been attacked with insanity, every one would have first called in his family physician to treat the case, but in a short time he might feel as though something more ought to be done and would desire a council, would he then call a *farmer*, a *merchant* or a *lawyer*, to decide as to the pathology, or treatment of her case! most certainly not. The most intelligent and skillful physician would have been selected, then why did they not act on the same principle in the asylum matters, and select a special commission from the medical profession; such men as would have been competent for their task, and known their duty, without the State being under the necessity of sending these uneducated experts in psychiatry to Northampton, Mass., and Concord, N. H., to receive instruction, before they could perform their duty. This is the first action of the legislature of Vermont, taken to educate her farmers, merchants and lawyers, in psychological medicine. We will extract such portions, as shall be of interest, from the

Report of the Joint Committee.—"It was a matter of surprise to some members of your committee, to learn at the inception of their investigations that the asylum was not the property of the State, but a private corporation.

"We do not find since the gift in 1843 by the State of $3.000, that any considerable donation has been made to the institution by the State, or by any corporation or by private individuals, hence the present property of the institution has grown from the fund of $33.000, received previous to 1844. * * * The present value of the proporty, as estimated by Gov. Holbrook, one of the trustees, is $500.000. Your committee estimate it at a very considerable excess of that amount.

"The trustees, while refusing to recognize any authority in your committee, yet afforded them free access to all parts of the buildings and grounds, and inspection

of the records and other papers of the institution, and treated us with uniform courtesy. * * * We visited the Asylum at Brattleboro on three different occasions, viz: Oct. 17th, 1872, Nov. 16th, 1872, and June 24th, 1873. At the time of our first visit, we found the number of patients at the Asylum to be four hundred and eighty-five, a number, as the committee believe, and as the officers of the institution admit in their testimony, far too large for the capacity of the buildings comfortably to provide; in this view, your committee is sustained by the testimony of commissioner Bullard, who fixes three hundred patients as the maximum number which the asylum could accommodate. About seventy-five of the patients were, at the time of our visit, confined in underground apartments which were damp, unwholesome, and entirely unfit for human beings. The sleeping apartments in this underground portion were small, illy ventilated, warmed and lighted. The sleeping apartments of the males being altogether too small, while some of those in the female ward were only nine feet in depth by four in width, and eight in height, opening into a narrow hall and ventilated only by eight two inch augur holes bored through the door. About midway of the length of one of these lower wards, and at the end of another ward and at the side are sinks which receive the urine and slops from the wards above, and at all seasons of the year must impart unwholesome odors. On the occasion of our first visit, although disinfectants had been freely used, your committee found the odors extremely unpleasant. The officers of the institution offer as an excuse for confining patients in this unwholesome manner that, at the time the asylum was built, it was common to use underground apartments for confinment of patients.

"Your committee find the fact that the whole of said asylum was at the time of their first visit, inadequately warmed and ventilated; we also noticed at this and subsequent visits, the almost entire absence of anything to relieve the harshness of restraint: very few pictures broke the hard outlines of the walls; while at Northampton and Concord we found the walls embellished with pic-

tures; not costly, but pleasant to the eye and sense, and which we believe must tend to draw these unfortunates from contemplation of themselves, and form a means toward their cure. At Northampton, we also found a large yard decorated with shrubs, and yet securely enclosed where the more dangerous class of patients might exercise; and in the central part of this yard an artificial mound had been made, enabling these unfortunates to enjoy the beautiful landscape. At Brattleboro we found nothing of this kind, except some small yards, enclosed with high and close board fences, without tree, shrub or even grass, to relieve their untidiness. We were told, it is true, that other classes of patients had exercise in labor upon the farm, or in walks taken under the direction of their keepers, but for this class no effort looking toward opportunity for out-door exercise or amusement seems to have been made."

The committee here dwell quite lengthily on the literary exercises that they witnessed at Northampton, and which the patients listened to nearly every evening; they give, also, a detailed list of religious exercises held in the chapel on the Sabbath; then they remark: "No such exercises are practiced at the Vermont asylum, though we learn incidentally, that Dr. Draper, the new superintendent, has introduced them to some extent."

"We find that punishments are sometimes inflicted at the Vermont asylum, and that the punishment known as bathing has been inflicted upon patients by the attendants, and by the order of the superintendent, in the manner following: The patient for some offence, or supposed offence, is taken to the bath room, his hands tied, laid upon his back in the tub, and the faucet turned allowing a stream of cold water to run upon the head and face while the body is immersed in tepid water, and is so kept until relieved by the attendant.

"Your committee believe that there should be a radical change in the Laws, regulating the admission of patients, and that the statute of 1855 ought to be repealed. The statute provides that a medical examiner should be appointed by the Court of Chancery of Windham County,

whose certificate of the insanity of any person proposed for admission should be conclusive proof of the fact. Under this statute the court appointed Dr. Rockwell, Sen., the superintendent of the asylum, medical examiner, and continued him in that office during the remainder of his superintendency. This appointment, as might be naturally expected, opened the door for fraud and chicanery, upon the part of some of the officers of the institution. At Burlington in July, 1872, Joseph A. Stockton, a person confined in the asylum, as insane, was brought before Judge Pierpoint on a writ of *Habeas Corpus*, and at that hearing William Rockwell, Jr., on behalf of the asylum, produced what purported to be the original certificate of Dr. Rockwell, Sen., certifying to Stockton's insanity, which paper was dated, as of the date of Stockton's admission as a patient; and claimed through council, that the certificate under the statute of 1855 was a bar to further proceedings. Judge Pierpoint so held and recommitted Stockton without any examination as to his sanity or insanity. Stockton, being a citizen of another state, applied to the United States Courts for relief, which was afforded him and he was discharged. Dr. William Rockwell, Jr., in his testimony before the committee, admitted that he dated the certificate back; that it was a copy; that the original was not in his possession; and that in fact he never, to his knowledge, had seen the original, and that this paper on which Stockton was readmitted was made after he (Stockton) had escaped from the asylum.

"We are satisfied persons have been admitted to said asylum who were not insane, who were admitted on the certificate of a single physician.

"Your committee find that the supplies of food at the institution are sufficient in quantity and quality, and we are unanimous in the opinion that the food is well cooked and properly served.

"We are confirmed in our opinion that the modern improvements have not yet been adopted in the Vermont asylum, but we found on our visit on the 24th of June that extensive changes are being made. Two additional wings are in process of erection, each thirty-five by ninety

feet, one of which when completed will be three stories and the other four stories high. These wings, we were informed, would give one hundred and twenty additional rooms for patients, each room being eight by ten, and nine feet studding. Each room will be furnished with two flues for the reception of pure air and the expulsion of foul air, and it is proposed to warm the entire buildings, new and old, with steam, and ventilate them by the most modern of ventilating apparatus, the fan. When the new buildings are completed, the officers propose to remove all the patients now in underground apartments to more pleasing and comfortable quarters above ground. These changes and improvements have been in progress since the appointment of Dr. Draper, superintendent of of the institution. Dr. Draper was appointed upon the resignation of Dr. William Rockwell, Jr., and took charge of the institution in February last.

"We feel that we cannot conscientiously close this report without earnestly recommending the erection of a state asylum, to be under the watchful eye of the good people of this state, that private interests cannot in any way influence the conduct and action of the officers of the institution, and that the objects and end of such a charitable institution may be fully and effectually carried out, and this class of unfortunate beings receive the tenderest care.

"At the time of our last visit to the asylum, we found the whole number of patients in the asylum was 476, of which number about 80 were state poor, 200 town and indigent poor, and the remainder were patients from out of the state.

"Your committee find that, notwithstanding the drawbacks surrounding the institution, the death rate among its patients has been less for ten years past than at any other institution of the kind in New England, except the New Hampshire at Concord, and but a small per cent above that. There is very much in the conduct of the asylum which your committee can recommend. We are much pleased with the management of Dr. Draper, and under his superintendency, with the improvement in

buildings, before mentioned, we confidently hope that the various grievances, which we have felt compelled to report, as now existing, will soon diappear, and the institution become all that its patrons could expect of a private corporation."

REMARKS.—We have extracted quite extensively from the various reports concerning our insane asylum matters; in regard to the truth of these statements we are ourselves unable to inform our readers; but we do believe that the committee were much inclined to attach blame to the managers of the asylum, and this feeling seems to have given coloring to their report. This institution has apparently been a financial success, and private interests have prevented its being possessed of all the modern improvements in ventilation, warming, and sewerage, that it would have had had it been under public control.

We most heartily concur with the opinion of the committee that the institution should be owned and governed by the state. Yet the asylum is being conducted in good faith, and its charter cannot be easily revoked; then the state does not need two insane asylums and probably will not be to the expense of building a second one.

The committee recommended the passage of a law like the one in Massachusetts, for the commitment of insane persons, requiring that no one shall be admitted as a patient, without the certificate of two physicians, one of whom shall be the patient's family physician, and further, requiring a certificate of a Justice of the Peace that those physicians are in good and regular standing, and that medical examiners be elected by the legislature to examine all persons from other states. We would recommend that one medical examiner be elected by the legislature in each county, and that no patient be admitted as insane without his certificate, unless in case of doubt or dissatisfaction either on the part of the patient, friend, or examiner, in which case an appeal may be made by either parties to one or two examiners from the adjoining counties, when their conjoint certificate shall be required for the commit-

ment of the person. The same examiners could act in those cases of persons from other states.

The committee deem it of paramount importance that the walls of the asylum should be "embellished with pictures," because they, "tend to draw these unfortunates from contemplation of themselves, and form a means toward their cure." This feature of treatment of the insane they probably learned from their visits to other hospitals. But whether pictures will have a beneficial effect on any other than those whose delusions relate to themselves, these psychological experts do not inform us. The method of treatment adopted by Dr. Rockwell, Sen., will explain his great percentage of cures; and if the managers of the asylum adopt a picture plan of treatment to the exclusion of the one by him, their percentage of failures will surely increase. We will make a few extracts, touching upon this point, from

Dr. Rockwell's Report for 1872.—"Since the opening of the asylum, four thousand seven hundred and forty-eight patients have been admitted, four thousand two hundred and fifty-three have been discharged, and four hundred and ninety-five now remain. Of those discharged, two thousand and sixty-seven have recovered.

"The farm continues to be a useful appendage. It is a great auxiliary in the treatment of patients, both as promoting health, and improving their mental condition. Exercise in the open air increases the appetite, promotes refreshing sleep, and invigorates the whole system, and thereby tends to divert the mind from its delusions, and aids in its complete restoration to health. Experience proves that a greater proportion recover, who are occupied in some useful manner, than those who pass their time in comparative idleness. We have a large shop, in which those who are mechanics can work, whilst others amuse themselves in the bowling alley, or at other games. We encourage anything that will take up their attention and divert them from their delusions.

"During the past year there has been added a large amount of water to the former supply of the institution, which gives us ample quantities for all purposes, and

greatly increases our facilities for extinguishing any fire that may hereafter occur. It is brought more than a mile, to a large reservoir situated on a hill near the asylum, from which, by means of a hydrant and hose, we can throw a three inch stream of water into any part of the building.

"We have also made an extensive addition to our library, and now have a selection of books suitable to each individual taste. We also receive many daily and weekly papers, and the patients keep as well posted upon politics and the general topics of the day, as most people outside."

Remarks.—It will be seen that improvements were going on under Dr. Rockwell's superintendence, for the comfort and welfare of the insane; it is also seen that farming and mechanical work furnish employment for many inmates. This to our mind is the true course of treatment of the insane; it developes the muscular system, and the out-door employment furnishes pure air; whilst the mind must be in a healthy channel in the performance of those labors. And we sincerely hope that the managers of the Vermont asylum will have the fortitude to withstand the public clamor, and not change the course of treatment that experience has proved to be so successful.

A Review of the Report of the Joint Committee of the Legislature upon the Condition of the Insane in the Vermont Asylum for the Insane, by Henry D. Holton, M. D., Brattleboro, Vt., Medical Examiner to the Vermont Asylum for the Insane, and Professor of Materia Medica and General Pathology in the University of Vermont.

I have thought it might be of interest to the profession, although they have been so thoroughly ignored, to review

some of the facts upon which the late report of the legislative committee of investigation into the condition of the Vermont asylum for the insane, was founded. It appears from the report that the sum of thirty-three thousand dollars has been given to the institution at different times, and that the property now owned by it is of the value of five hundred thousand dollars. It would seem that no better record of financial ability could be asked than this. We do not believe there is another institution in the country that can exhibit anything that will compare with the financial management of this asylum.

The rooms spoken of as "ventilated only by eight two-inch augur holes bored through the door," have each two windows containing four lights of glass. The "augur holes" are for the purpose of allowing an inspection of the interior of the room without opening the door.

Much is said by the committee in praise of the grounds at Northampton where patients can take out-door exercise; and the statement is made that "at Brattleboro we found nothing of this kind, except some small yards, enclosed with high and close board fences, without tree, shrub, or even grass, to relieve their untidiness." The only way in which we can explain the gross mistake in this paragraph is by presuming that the committee entered by the carriage way which runs between the barn and the rear of the main building, and thus in some way allowed the beautiful park in front, containing something like twenty acres, to escape their attention. This park has always been much admired by every one visiting the asylum. It is laid out with walks, and filled with trees, shrubs, and flowers. It also contains a fountain and several rustic summer houses and arbors, beneath whose welcome shade the feeble patient can rest. In this park all classes of patients, except those whom it is impossible to control, are allowed to take exercise with their attendants whenever they are able, and the weather is suitable. On pleasant days such of the patients as are able are taken to ride in large wagons.

The chapel exercises, and amusements at the Northampton asylum are spoken of at considerable length, and it is then stated that, "No such exercises are practiced at the Vermont asylum." How this error could have crept into the report we cannot conceive, as it has long been the custom of the different clergymen of the village to take turns in holding exercises in the chapel on Sunday, or for Dr. Rockwell to conduct those exercises himself. Entertainments of various kinds have also been given for the amusement of the patients.

It is customary at this institution to require of all the patients, whose physical condition will warrant it, that they shall once in the week take a general bath. Every physician will appreciate the hygienic importance of this regulation, and will also understand that the insane might not only imagine this to be a punishment, but might resist and refuse to be made clean. This much is true, the old-fashioned bathing box which formerly was a part of every asylum, was removed from this, eighteen or twenty years since. Why should the testimony of ex-patients be credited on this point, while the testimony of the same patients to the eflect that the food provided for them was inferior in quality, and insufficient in quantity, was rejected as untrue?

The closing paragraph of the report seems to destroy all that has gone before, for we are told that "notwithstanding the drawbacks surrounding the institution, the death rate among its patients has been less for ten years past than at any other institution of the kind in New England, except the New Hampshire, at Concord;" that was one fifteenth less. The mortality for the last year, ending with August 1st, was thirty, or about six per cent. According to Dr. Thurman, if the mortality exceeds nine or ten per cent it is considered highly unfavorable, while a mortality of less than seven per cent is highly favorable. In most of the asylums of this country, we believe the mortality averages about eight per cent.

In comparing the results of treatment, of any disease in different hospitals, we should be likely to give the

preference to the one that showed the minimum of mortality. On the other hand we should not expect to find this minimum mortality in an institution over crowded, ill-ventilated, and where the patients were brutally treated. We are forced therefore by this admission of the committee to the conclusion that the patients have been placed in favorable hygienic conditions, and have received such treatment as has tended to reduce the mortality far below the average in similar institutions.

Report of an Obscure Case.—Read before the Vermont Medical Society, October 16, 1872.—*Communicated for publication in the Vermont Medical Journal, by L. C. Butler, M. D., President of the Vermont Medical Society, Essex, Vermont.*

Mrs. W., age 44; complexion light; eyes blue; quite thin and spare; temperament nervous; the mother of five children, the youngest two years old; menstruation regular, but rather profuse, and followed by leucorrhœa continuing almost from one period to another. For the past eight years has had occasional paroxysms of severe distress about the region of the stomach. These paroxysms come on suddenly, sometimes immediately after eating, sometimes in the night, waking her from a sound sleep, sometimes conjointly with the menstrual period, sometimes midway in the interval, and sometimes immediately after. The first paroxysm came on suddenly while she was reading. The first sensation is that of distress at the pit of the stomach, with bloating so rapid as to require her clothing to be unfastened. She describes the feeling as agony instead of pain, as though her stomach was in a vice, and the vice being screwed up to its utmost tension; extending to her back and

through the lungs and chest, producing a keen sensation of impending death from suffocation. At times she loses the power of speech, though never of consciousness. The paroxysms last from half an hour to two hours. Sometimes there is slight spasmodic action of the arms, otherwise none. During the paroxysms she cannot lie down, but sits up in a partly reclining posture, supported in the arms of a friend or relative, throwing her head back to catch a breath. She describes no sensation of faintness, or loss of sensation. She understands all that is going on around her, but has no power to express her wishes or thoughts. Her countenance is blanched as with the damps of death. In her own expressive language she says, "I feel all gone all over."

During the progress of gestation with her last child, she was entirely free from the paroxysms, but the child was scarcely born ere she had one of the severest attacks she has ever experienced, and it was repeated again and again in a very short period of time, one paroxysm following another in rapid succession. There is no periodicity to the paroxysms, nor do they seem to be increased, by any thing taken into the stomach. Warm bread and biscuit she eats with impunity, but stale bread quickly sours upon the stomach, and attacks are often followed with sharp acidity, but little nausea. Her habit is constipation, but no more so before than after the paroxysms. The circulation is only slightly affected, pulse a little quickened but not sufficiently to indicate any disturbance of the functions of the heart.

The distress is located at the pit of the stomach but there is no tenderness at either orifice of that organ. In the region of the liver there is a slight tenderness and also of one of the vertebræ opposite the stomach. Applications of chloroform, of ammonia, or mustard, are attended by none of the usual sensations produced by those substances. She scarcely feels them. The internal administration of stimulants, like brandy, increases the distress, but a camphorated anodyne will cut them short, and the paroxysm leaves as suddenly as it came. In a day or two

she is about her accustomed work, weakened somewhat by the violence of the distress and requiring some time to restore the impaired energies of the system, but otherwise comfortable in health till another paroxysm shall come on.

Such is the history of this singular case. To me it is truly singular and obscure. And the inquiry, what is it? has more than once come unbidden to my lips, as I have stood by her bedside and witnessed the agonies of the hour. Other physicians have attended her in these paroxysms, and have been puzzled to understand their pathology. They have administered temporary relief and have been pleased to see the apparent agonies of death pass away into the soft quiet sleep. But the difficulty has returned to plague both physician and patient. In an instant it has again stricken her down, and all our nicely arranged theories as to its cause have been upset. What is the secret spring, and what giant is it that touches it so suddenly, and returns so quickly to his hiding place, as to elude the most vigilant observation?

Is it dyspepsia? There are no symptoms indicating such an affection unless it be the acidity of the stomach which occurs after the paroxysm has passed away, and the costiveness, which is more likely to result from derangement of the biliary organs, than from the stomach. Is it gastritis? It has no marked premonitory symptoms, it has no period of incubation, of progress or of termination, such as usually mark this disease. The stomach recovers its normal tone and vigor, once the paroxysm subsides. Is it gastrodynia? Yes. But the phenomena of gastrodynia are indications of disease, not disease itself, just as dropsy is a symptom of derangement of some one or more of the vital organs of the system. Is it cancer? Of the cardiac orifice if either. But the only symptoms which indicate it, are the excruciating distress, which the patient says is not pain, and which if cancer were present, ought to have produced ere this, some other more decidedly marked symptoms of its existence. Is it symptomatic of uterine affection? The uterine functions appear to be well and regularly performed. Menstruation

is regular, only occasionally profuse, but not menorrhagic. Is it an indication of the climacteric period? Does that often indicate its approach so long before hand, and give so little hope of its final coming? If so we may hope with some courage that nature will ultimately do what physicians have not yet been able to do.

Is it spinal irritation? Doubtless. For this is a term which is exceedingly expressive and comprehensive, and under which may be cloaked a vast amount of ignorance in pathology, and empiricism in treatment. There is spinal irritation no doubt. A slight tenderness of the vertebræ opposite the stomach has recently developed itself, and doubtless will continue to exhibit, the symptoms of spinal irritation. Indeed the whole history of the case with its peculiar attending symptoms, has pointed to the spine as its origin, and to the pneumogastric plexus especially, as the hidden spring of all the excruciating distress this woman has endured. But where lies the giant that has touched the spring, and what is it that rouses him up? He does not come, like the lion for its prey "unbidden from his lair." Something prompts his coming, what is it? To reply, spinal irritation, is to give the result without the cause, the shell without the meat, and the question returns, which no developement of medical science has yet been able satisfactorily to answer.

What is spinal irritation? Must we not judge of it, as of life, which evades all research as to its essential properties, by the developments which it exhibits to our senses. Believing this view of its pathology to be the correct one, the therapeutics were readily decided upon; counter irritation by means of blisters, cups wet and dry, one or both, to the spine, and nervines and tonics for the general system. Unfortunately for the practical demonstration of the soundness of my pathology and therapeutics, the patient removed to another part of the state, so that I had no opportunity of testing it.

Note.—Several times during the progress of the case above related, the passage of gall stones suggested itself as the probable cause. But the peculiar diagnostic symptoms of that difficulty not being present, no partic-

ular examination was made of the feces, to determine the fact.

A case similar in many respects has been mentioned to the writer, in which a gall stone seven-eighths of an inch in length by one-half inch in diameter was found, post mortem, impacted in the walls of the gall bladder, and in such position as to absolutely prevent its passage through the duct. Such may be the fact in this case. If so the post mortem only will reveal it. If so moreover it must be conceded to be a very accommodating calculus to remain quiescent during all the pressure upon, and consequent derangment of the abdominal viscera, during the period of gestation, and very ungenerous to wake up with all its vengence, just as the joys of maternity were coming into full bloom.

A Case of Perforation of the Duodenum.—Its Sudden Invasion and Consequent Peritonitis.—Death.—Post Mortem Appearances.—By A. P. Grinnell, M. D., Burlington.

A. W., aet. 55; by occupation a farmer: was attacked with severe pain in the epigastrium on Friday, 1, P. M. while walking through the streets in Burlington. Previous to the attack he had enjoyed good health, had never complained of difficulty in the digestion of food, was able to perform the usual routine of labor on the farm and had always considered himself a healthy man. The physician called; after thoroughly examining the case, deemed it one of colic and for its relief administered medicines accordingly. In six hours the pain was less intense; pulse

80 per minute; intellectual faculties unimpaired and the patient was thought to be out of danger.

During the night patient slept at intervals, taking goodly quantity of nourishing drinks, and at 8, A. M. Saturday was feeling so much improved that he seemed determined to ride home, a distance of seven miles, without further delay. In four hours from this time (24 hours from the time of attack,) his pulse had increased to 110 per minute; extremities cold; difficulty in respiration; excessive thirst; and he seemed on the verge of immediate dissolution. The symptoms tending to death steadily increased until 10, P. M. when he died, 33 hours from the time he had supposed himself to be a healthy man.

The post mortem (10 hours after death,) revealed a perforation of the duodenum one half inch from the pylorus, through which had passed into the cavity of the peritoneum, all substances taken as food or drink during the time of his illness. An ulcer was discovered near the point of perforation which had destroyed all but the serous coat of the intestine. No deviation from health was observable in the stomach, or other portions of the intestines. The peritoneum was inflamed over a greater portion of its surface, and pus had accumulated in large quantities in the pelvic region.

Some things connected with the course and termination of this case, are certainly peculiar and deserve a more extended notice. Why had he not given evidence, of the formation of an ulcer, for weeks or months previous to the time of attack? Why was the peritonitis ushured in without a chill, and why was the pulse unaffected until a few hours before death? He was free from nausea or vomiting, was perfectly conscious to the last, and the bowels were not tympanitic during his illness. His symptoms were so peculiar that in following any train of reasoning one would become confounded in making a diagnosis.

The history and effects of intestinal perforation were so unlike the condition found in this patient, that only one physician present had a suspicion of the existence of what the post mortem revealed. It is quite possible

that ulceration and perforation occurring in any other portion of the duodenum would have been attended with more symptoms characteristic of the disease. Being so near the pylorus, the contents of the stomach passed over the ulcerated surface, occasioning so little irritation that he was unconscious of its presence.

Penetration of the Walls of the Abdomen, Uterus, and Fœtus by a Sewing Needle, in the eighth Month of Gestation.—Its Extraction.—Delivery at full Time, of a living Child.—By H. H. Langdon, M. D., of Burlington, Assitant Surgeon in the Seventh Regiment of Vermont Volunteers.

Permit me to present a case for publication in your Journal, that is unique in every sense of the word. On the 29th of June, 1873, Mrs. ——, aged 38 years; eight months pregnant, with her seventh child, (and by the way, the first six were boys, and this a girl, a fortunate escape from the "seventh son"), and while measuring a web of cotton cloth, put a common sewing needle over two inches long, into the cloth for a mark where to cut it, and in leaning over the table and on the cloth, ran the needle into the abdomen, about three inches below the umbilicus, and into the child. As might be imagined, the motions of the child were very violent; to use her own words, "I thought the child was going to jump out of me." The needle was drawn into the uterus, and by the motions of the child produced great pain, by the scratching of the head of the needle upon its anterior wall.

I was called to see her at this time, and upon making an examination could distinctly feel the end of the needle through the parietes of the abdomen, moving about as the child would move, after a few moments there was a spasmodic movement of the child, and I could then distinctly feel the needle about two inches above its place of entrance. I immediately made an incision more than an inch long, and deep enough so that I could see the end of the needle moving under the thin tissue left; again the child moved violently, and the needle was no where to be felt. I waited a few moments, but no indication of its location could be had, and not caring to go any farther upon my exploring expedition without my guide (the needle), I thought at first to induce labor at once, but finally concluded to go and lay the case before Dr. Howard, (Professor of Surgery in the Medical College in this City).

He went with me, and strange as it may appear, the needle had made its appearance in the precise spot where I had made my incision. Dr. Howard with scissors cut about the thickness of a wafer deeper than I had cut and seized the needle with forceps, and drew it out. He has the needle now. The wound was closed by two sutures of silver wire, and hermetically sealed with muslin and collodion; no inflammation followed. I saw her several times subsequent to the injury. There was but little tenderness, and no pain in the region of the wound.

I awaited her confinement with anxiety, which took place July 24, twenty-five days after the injury. There was nothing to distinguish it from ordinary confinements. I examined the child very carefully, but could find no mark upon its person that led me to think was the place where the needle entered. I think that the needle must have run into some one of the epiphyses which held it firmly, so as to draw it through the abdominal parietes, and also to crowd it back partly through the same. And here I will say, that she removed one of the sutures about one week before her confinement, because it scratched her clothes, as she said, and I removed the other at the time of her confinement. The cicatrix was healthy. That a

wound of this character, made under such circumstances, should result so favorably, without producing peritonitis, or metritis, or any injury to the child, is a marvel. I saw the mother and child to-day (Sept. 20, 1873), and both are well in every respect.

Report of a Case of Opium-Poisoning, with Treatment and Recovery.—By Martin Bruce, M. D., Brattleboro, Vermont.

A messenger came running in haste to the office. While returning with him I learned these facts: Mr. F., aged 40, a carpenter, had been for several days in a state of melancholy. He came in from his work about six o'clock in the evening and immediately retired, requesting not to be disturbed. Four hours later his wife noticed that an ounce bottle of laudanum which she had that day brought home was missing, and was moved by suspicion to go to his room. She found him apparently dying, the bottle on the floor and emptied of its contents to the last drop.

I found him lying on a lounge, in a spasm, in the position of emprosthotonos; and immediately siezed a pitcher of cold water and dashed it upon his face and chest, which caused a prolonged stertorous inspiration, and relieved for the time the spasmodic condition of the muscles. Upon examination I found the pupils contracted to the merest point, the man breathing four times a minute, entirely pulseless so far as I could detect, extremities cold, capillary circulation venous, and all appearances indicating that the seal of death was already well-nigh set.

I gave him subcutaneously ten minims of a solution of atropine containing one grain to the ounce. He could not be made to swallow, so emetics or coffee were of no present avail. To arouse him in any degree was not possible, but he was kept in unrelieved motion by shakings and movings about, being constantly whipped over the face, neck, shoulders, back and chest with a wet towel. Spasm was frequently recurrent, but always relieved by the dashing use of cold water. Twenty minutes after the first injection I gave another, also of ten minims. Fifteen minutes after the second the pupils were slightly dilated, the spasmodic rigidity of the muscles was less severe, and he was made to swallow coffee with but little difficulty; and in an hour from the time of my arrival he was sufficiently aroused to say, but very thickly, "O do let me sleep." For four hours he was kept in motion, at first by being jolted about, later by being walked around the room or yard, or back and forth along the garden path, giving him occasional but short periods of rest, from which it was difficult to arouse him, being sometimes necessary to pull suddenly a lock of hair or beard to break the spell of stupor. Strong coffee was given at intervals through all the time after swallowing was first effected.

When four hours had passed, and of such tiresomeness as only those who have ministered in like cases can know, he was allowed to sleep twenty minutes. During this time the breathing was regular, heavy but without stertor, and twelve times a minute; pulse 40, laborious and full, but regular; extremities warmer; and the venous character of the capillary circulation in a measure relieved. From this sleep he was aroused quite easily. I then left, directing that he be not allowed to sleep more than half an hour at a time, and that strong coffee be given occasionally through the night.

Next morning I found him with a pulse of 55, respiration 16, pupils somewhat contracted, great thirst, severe headache, and a temperature of 100°. Directed him to remain in bed, a saline cathartic to be given, application of mustard to be made to the back of the neck, and the

diet to be liquid and non-stimulating. In the evening found him feeling well and reclining in a lounge-chair; pulse 64; respiration 17; pupils larger than in the morning and probably of normal size; temperature 98.5°; pain in the head gone; bowels had moved; secretions natural; and he was feeling quite himself, only a little stupid and heavy.

The next day he was reported to me as having said "I wish that doctor had staid away and attended to his own affairs."

> "——Gentle knave, good night;
> "I will not do thee so much wrong to wake thee."

EPILOGUE:—I sincerely desire that that man may live to repent of all his sins, and till he shall have known at least some feeble gratitude toward me for that weary four hours' fight with the execrable shape that would gladly have carried him away to the valley of dark shadows.

Phlebitis following Typhoid Fever.—Report of three Cases.—Remarks upon its Pathology and Treatment. By John M. Currier, M. D., Burlington, Vermont.

Phlebitis following typhoid fever is not of frequent occurrence, nor is its diagnosis involved in any great obscurity, especially when attacking the crural vein. The swelling of the entire leg, the consequent hardness of the calf, the attending pain, and stiffness, are enough to satisfy the physician who has had experience with this affection, of the nature of the case before him, without further examination. But when other veins are affected the diagnosis is more obscure. The crural form is similar to the affection as it occurs in women after parturition, nor is it unlike the traumatic form in the male. More or less ten-

derness along the course of the affected vein, feeling like a hard cord under the finger, and the measurement of the corresponding limb being greater than the well one, will usually be found on closer investigation, and are sufficiently diagnostic symptoms.

During an extensive endemic of typhoid fever that prevailed in Orleans county about ten years since, several cases resulting in phlebitis came under my observation, some of which I will relate in this paper. Dr. Mason, my much esteemed friend, in the same county, informed me that he had seen several similar cases, in the same endemic. More or less swelling of the limb takes place in consequence of obstruction to the circulation from accumulations of the products of inflammation on the internal surface of the vein. The patient was more usually found sitting up, with only the swollen limb giving any trouble, generally he had so far recovered from the attack of fever that he needed no medical attention, is about the house, partaking quite heartily of nourishment. The patient often considers himself affected with muscular rheumatism, a mistake liable to be made by the physician.

Case, I.—Mr. L., aged 23; always been stout and healthy; one of a family of six, all of whom were having typhoid fever; had a severe attack, but had recovered so as to be up and take his meals with the rest of the family at the table. He called my attention to the condition of his leg; an examination revealed crural phlebitis. I put him upon his back, with the limb elevated about twenty degrees. He was kept in this position till all tenderness of the vein and swelling of the limb had disappeared, which was nearly three weeks.

The elevation of the limb removes the pressure of the blood from the walls of the vein by favoring its return from the affected limb; furthermore, not so much blood is sent into the limb through the arteries, while in this position. The heart does not beat with so much force when the patient is thus at rest. All these three conditions of the circulation are highly favorable for, not only the reduction of the inflammation in the vein, but

prevents further extension of it, and further deposition upon the coats of the vessel. Flannel soaked in warm vinegar was kept upon the limb over the diseased vein nearly one half of the time. I cannot say that this application was any benefit in the case, but I thought so, and it is my usual custom to make it. He recovered without any subsequent trouble from the limb.

Case, II.—A Frenchman aged about 33; a laborer; had always been a rugged man; had had a severe run of typhoid fever, had got up, and began to be hungry, but not having the best of care was allowed to eat what he wanted, and to go where he pleased. He came under my care only at the time of his coming down with crural phlebitis. I put him on the same plan of treatment as in the previous case. The swelling and tenderness gradually disappeared, though it was the third day before any amelioration was perceptible, and then, comparative measurement of the limbs was the first thing that showed the wisdom of the course of treatment.

This affection comes on insidiously, and the general disturbance of the system does not take place till several days after the swelling of the limb. The tongue remains clean till after the heart becomes accelerated. The obstruction in the circulation is at first a mechanical one, but as the blood is more and more impeded, it undergoes vital changes, becomes septicæmic and a general feverish condition of the system is the result.

Case, III.—Mr. T., aged about 34; a stout healthy man; had a severe attack of typhoid fever, and was getting better, but had not left his bed; seemed to be gaining as fast as patients usually do in convalescence from that fever. One day he said he had not been feeling as well as usual, that his hip had pained him very much during that day and previous night. Inspecting the parts found the muscular structures about the hip swollen hard, the swelling extended downward over the outer and posterior aspects of the thigh a short distance. All the muscles of the deeper parts about the hip were affected.

Diagnosis:—phlebitis of the internal iliac vein, and formation of a thrombus which offers great obstruction to the flow of blood from those parts. Usually these thrombi are washed away in the blood current in minute particles so that no serious results follow by the plugging of the smaller arteries of the lungs. In this case the patient was not so fortunate, on visiting him one morning only a few days after his attack, he said his hip was better, but his breathing was very bad. A fit of suffocation had come on in the night quite suddenly, from which he had only partially obtained relief. Examination of the lungs revealed a diminution of the respiratory murmur. There was a sensation of breathlessness accompanied by a slight inability to talk. The swelling and tenderness of the hip had entirely disappeared since last night.

Diagnosis:—detachment of the thrombus in the internal iliac vein, its floating away in the blood current, and its lodgment in some of the smaller branches of the pulmonary artery. This detachment left the blood a free course through the vein, which quickly drained out of the tissues surrounding the hip, hence the sudden disappearance of the swelling. The obstruction of the circulation in the lungs interfered with the oxygenation of the blood, hence the difficulty in breathing and speaking.

The swelling of the hip did not make its appearance again. The lung affection gradually and rapidly increased and the patient bore the appearance of one in the last stages of typhoid pneumonia. The fetor of the breath was extreme, and it might naturally be expected, from this, and from the arterial occlusion, that there was gangrene of the lungs. Expectoration was very profuse and offensive, the bronchi seemed filled, and increased till he died, only a few days after the lungs became implicated.

I am inclined to believe that phlebitis in typhoid fever is much more frequent than is commonly suspected, especially when there is not sufficient obstruction in the vein to the blood to cause a passive congestion of those parts whose capillaries are drained by the affected vein. The detachment of these minute thrombi would not, nor could not, be suspected until manifested by consequent

lung disease. I can call to mind several cases in my earlier practice where circumscribed pneumonia made its appearance suddenly, and late in the fever, which I have in my later pratice, been accustomed to attribute to this unobserved phlebitis. The affection does not appear to be so severe as when it follows parturition, but there is more fear that the thrombi will be washed away in the blood current, on account of the lesser firmness which they attain in the impoverished blood of typhoid fever. The physician must be aware of the danger his patient is in when phlebitis supervenes.

Editorial.—Medical Societies.—Brevities.—Commencment of Medical Lectures in the University of Vermont.—Medical Graduates of 1873.—*Obituary Notices. Marriages.*

EDITORIAL.—The Vermont Medical Journal is not a wild scheme, nor a project, hurridly attempted, but the fruit of well matured plans and preparations. Several years has this been under contemplation, and every opportunity has been embraced to further this object. It is now more than two years since this Journal was first announced in several medical periodicals that it was about to appear. Many have been the obstacles that presented themselves in our path during this time, but slowly and one by one have they been overcome, and to-day we are before our readers with Number One, of 48 pages. To us it has been a great sacrifice, involving a change of location, the forsaking of cherished and firm friends, and the giving-up of a good field of practice, for a home among strangers

to engage in an enterprise which many of the leading physicians of the state said could not be made to succeed. Not only has it required considerable capital invested in the preparation of this undertaking, but much time must be spent in its prosecution. At the same time, being engaged in private practice, we find our labors doubled and sometimes trebled, yet we hope to make this a success.

We have selected Burlington as our home thinking it might give to our periodical an impetus which could not be given to it elsewhere; here is the only medical school that the state can boast of, this should throw around us an influence favorable to our progress.

We have to thank those medical gentlemen who have come forward, so readily, not only with their money, but good wishes and valuable papers, some of which have not appeared in this Number. We would invite the members of our profession throughout the state to contribute to the pages of this Journal.

The character of our Journal will vary somewhat from the ordinary style of medical periodicals. It is our aim to make it a repository of original contributions mostly from men of our own state, and only such medical news as shall pertain to the profession of Vermont. We shall not deal in news very extensively outside, but work for the greatest good to the profession at home. We do not intend to republish articles from other periodicals, nor make extracts from them.

We would solicit, through the secretaries of the various medical societies in the state, such important matters as will be of interest, that come before their meetings. We do not care to know who presides, nor the names of those members present, nor any such unimportant matter, but reports of interesting cases, and abstracts of papers read at the meetings, are often of interest to the general profession, such we want.

We would like a history of the epidemics and endemics as they may occur in the different localities of the state from time to time, particularly when there is an appearance of some unusual form. Such reports will serve some good purpose in the study of disease in the

future, and may be of interest and profit to neighboring practitioners at the present time. We would like, also, articles on the diseases of the different sections of our state as they have occurred in times past. The older members of the profession are the very ones to favor us with some of their reminiscences. The several county societies would be doing a good work if they would, at each meeting, have one paper devoted to the past history of the diseases of Vermont.

VERMONT MEDICAL SOCIETY.—The fifty-ninth annual meeting of the Vermont Medical Society was held at Montpelier, October, 8th and 9th, 1873. The following officers were elected for the ensuing year: L. C. Butler, president; H. S. Brown, vice president; E. S. Peck, secretary; S. S. Clark, assistant secretary; D. G. Kemp, treasurer; and C. M. Chandler, auditor.

TYPHOID FEVER.—In the discussion of the etiology of typhoid fever, Dr. Goldsmith of Rutland, took the ground that the poisonous matter producing the disease probably had its fermentative reproduction in the intestines and not in the blood, and gave for his belief the following facts:—

1. It is a special poison, in the sense that it produces typhoid fever and nothing but typhoid fever, and that, like that of small pox, and syphilis, it is developed according to the laws of continuous succession.

2. That as continuous succession was not predicable of any thing but living organisms, therefore this poison is of the nature of living organisms.

3. That the typhoid germinal matter was not known to reproduce itself, out of the body, in anything but human fecal matter.

4. That it was the quality of living organisms to produce educts, as alcohol is the educt of the yeast plant.

5. That as the blood, the expired air and the emanations of the skin do not carry or hold the contagium, the febrile intoxication must be regarded as a condition produced by the educt of the germinal matter absorbed from the intestine and affecting the blood and tissues.

6. That the contagium, being suspended animal matter, cannot (Dr. Tyndall) enter the air cells.

7. That there is no known method of propagating the disease which excludes the probability of swallowing the contagium.

8. That swallowing the contagium (the germinal matter), does with great certainty produce the disease.

9. That there is no necessary relation between the local enteric lesions and the constitutional state.

10. That the lesions of Peyer's patches are in the nature of bubos, and that the enlargements of the mesenteric glands are incident to and dependent on the disease of Peyer's plates.

11. That the contents of both of these are mere inflammation products, not typhus matter.

12. That if the reproduction (zymotic) process was in the blood the blood should yield the contagium.

13. That there is no condition of the blood peculiar to typhoid fever.

14. That there is no sequent disease or intercurrent disease peculiar to typhoid fever.

15. That within the body the only place where the contagium is found is in the fecal matter contained in the intestine.

16. That the contagium produces its most exquisite and constant effects on the feces-holding part of the intestinal canal.

17. That irritating matters (like ammonia) secreted from the blood into the intestine affects the whole not a special part of the intestinal tract.

18. That, so far as aborting the disease is concerned, no remedies have yet proved of the slightest efficacy than those which, when added to the fecal dejections of the typhoid fever patient, more or less efficiently disinfected the stools.

19. That such remedies have appeared to be efficient in the degree that they possessed this disinfecting quality.

20. That some recent experiments made in this State (Vt.) have shown more decided good effects from charcoal, creasote and carbolic acid, the two former by the

mouth the latter by the rectum, than from any other plan of treatment.

Dr. Goldsmith's argument was extemporaneous, without notes even.

VERMONT PHARMACEUTICAL ASSOCIATION.—This association held its fourth annual meeting on September 24th and 25th, 1873. The following officers were elected for the ensuing year: L. E. Sherman, president; C. C. Bingham and D. J. Merrill, vice presidents; A. W. Higgins, secretary; and C. Blakely, treasurer.

This association is in a flourishing condition, and the exercises of their meetings show that they are men who have taken a high and honorable stand for improvement in pharmaceutical education. The annual address delivered by Frederick Dutcher, the retiring president, was one of marked ability. Prof. Seeley of Middlebury College, addressed the meeting. One point touched upon by him was the propriety of establishing a Vermont College of Pharmacy, which drew out remarks from several members, favorable to such a movement. A report on the progress of pharmacy by W. J. Van Patten would have done credit to the American Association.

CHITTENDEN COUNTY MEDICAL SOCIETY.—The last annual meeting of this society was held at Essex Junction, October 21, 1873. The following officers were elected for the ensuing year: H. H. Atwater, president; L. F. Burdick and J. F. Miles, vice presidents; W. B. Lund, secretary; W. H. H. Varney, treasurer; and A. P. Grinnell, H. A. Bartlett and A. B. Somers, executive committee.

FUNIS TIED IN A SINGLE KNOT.—Dr. Atwater exhibited a funis tied in a single knot, in utero. The following extracts are made from his letter concerning the case, to the editor: "On the 16th of October, 1873, I was called to visit a young married French woman of Burlington, about 20 years of age, of small, spare figure. I found her in labor in her first pregnancy. The presentation was footling. In about half an hour she was delivered with

slight assistance, of a still-born female fœtus, the placenta coming away at the same time with the head. The fœtus was almost completely formed, but evidently poorly nourished. I did not get its weight or measurement, but judge that it would weigh between one and two pounds, and measure eight or ten inches in length. The placenta was perfect, and of a size corresponding to that of the fœtus. The umbilical cord was eight and one-half inches in length, and three-eighths of an inch in diameter, with a perfect single knot tied at its centre, and drawn up closely and firmly. The diameter of the cord was slightly the greatest on the placental side of the knot. Close to, and on each side of the knot the cord was only about one-eighth of an inch in diameter. There were no signs of disintegration of the tissues of the fœtus, cord or placenta.

"The mother stated that she had been married a year and a half; that she had always menstruated regularly, until the latter part of last April, when she ceased; that after this she had the usual signs of pregnancy; that at about four and one-half months she began to feel the motions of the child, and felt them distinctly about three weeks, when they ceased. By her calculation she was about six months advanced in pregnancy at the time of her confinement."

The White Mountain Medical Society.—This society was chartered in 1816, by the legislature of New Hampshire. It originally included physicians in Caledonia, Essex and Orange counties, Vt., and Coos and Grafton counties, N. H. Subsequently the physicians of Caledonia county formed an independent society of their own, but in July, 1873, arrangements were made to reorganize, including the physicians in the above mentioned counties, as first organized. The meeting was held at Lancaster, N. H. Dr. John McNab, of Woodsville, N. H., was chosen president; Dr. Cogswell, of Franconia, N. H., secretary. This society promises to be one of great strength and usefulness. The next meeting will be held at Wells River, Vt., on Tuesday and Wednesday, January 6 and 7, 1874.

Orleans County Medical Society.—The last annual meeting of this society was held at Newport, June 4, 1873. The following officers were elected for the ensuing year: L. Patch, president; C. L. Erwin, secretary and treasurer; and J. C. Rutherford, J. M. Winslow and C. L. French, censors.

Burlington Medical and Surgical Club.—The second annual meeting of this club was held at the residence of Dr. Currier, Nov. 10, 1873. The following officers were elected for the ensuing year: W. B. Lund, president; J. O. Crampton, vice president; E. S. Peck, secretary and treasurer; and J. M. Currier, H. H. Langdon and H. A. Crandall, committee of reference.

Meetings are held on the second Monday evening of each month. Refreshments are furnished by the member who entertains the club. Thus far the meetings have been very profitable and well attended.

Association of the Medical Alumni of the University of Vermont.—This association commenced its organization at the last commencement of the University, in July. The following officers were elected: P. O'M. Edson, president; twelve vice presidents; E. S. Peck, secretary; A. D. Target, treasurer; Prof. W. Carpenter, Prof. H. D. Holton, W. B. Lund and D. S. Kellogg, committee on constitution and by-laws, to report at the next commencement; and D. S. Kellogg, H. G. Howe and E. S. Peck, executive committee. The executive committee are empowered to make all proper arrangements for a celebration at the next commencement.

Medical Lectures.—The next annual course of medical lectures in the University of Vermont will commence on the third Thursday of March, 1874, and continue sixteen weeks. Cliniques will be held every Saturday.

Graduates.—The degree of M. D. was conferred on twenty-three of the medical class, at the last commencement of the University of Vermont.

FLORA OF VERMONT.—A Catalogue of the Flowering Plants of Vermont, by Prof. Geo. H. Perkins, PH. D., is now being published in the First Series of the *Archives of Science*, issued at this office. This is the most complete list that has ever appeared, being brought up to the present state of botanical science.

INDIAN MIDWIFERY.—Prof. S. W. Thayer relates a case of midwifery, that occurred near him while he was engaged on the Northern Pacific Railroad, that may be of interest to scientific obtetricians. A white woman was taken in labor, and it being an arm presentation, two frontier physicians, holding diplomas from regular medical schools, were called in attendance, both of whom, left her undelivered, stating that she could not be delivered, and that both mother and child must die. An old squaw who was usually employed by the Indian women in their confinements, came to the house on an arrend, hearing the woman complaining, inquired what was the matter, and went directly into her room, and said, "Me see many pappoose, some come good, some come bad." She sat down by the bedside, and was permitted to make an examination, when she exclaimed "bad, very bad; hand come, no good; pull him feet out, and pappoose come, then white woman get well." She then turned, and delivered the child.

BIBLIOGRAPHICAL NOTICES.

Diseases of the Ovaries. By T. Spencer Wells, Fellow and Member of Council of the Royal College of Surgeons of England; &c, &c. pp 478. With illustrations. D. Appleton & Co., 549 & 551 Broadway, New York.

Dr. Wells is the highest authority on the subject treated of. His experience numbers now above 500 cases, and a very large percentage of them are recoveries. The work before us is a comprehensive text-book, full of reliable information. It should be in the hands of every physician whether he intends to become an operator or not.

On the Structure of Cancerous Tumors and the Mode in which adjacent Parts are invaded. By J. J. Woodward, Assistant Surgeon. U. S. A. pp 40. 5 Figures. Washington, D. C.

This is the first lecture of a series, instituted to encourage the discovery of new truths for the advancement of medicine, and are known as the "Toner Lectures." Dr. Woodward has already won a national reputation in pathology, and this lecture shows a laborious research in the matter under consideration.

A Manual of Midwifery. By Karl Schroeder, Professor of Midwifery in the University of Erlangen. Translated by Charles H. Carter, B. A., M. D., B. S. Lond. pp 388. D. Appleton & Co., 549 & 551 Broadway, New York.

The subjects usually treated of in all our text-books upon midwifery are here presented to the student and busy practitioner, in a concise, yet comprehensive manner, embracing all the most recent advances made in this branch of medical science. A bibliography of the literature is appended to each subject, which is always convenient in a work of reference.

The Mineral Springs of the United States and Canada. By Geo. E. Walton, M. D. pp 390. D. Appleton & Co., 549 & 551 Broadway, New York.

This work is an useful one as a reference and guide. It contains an authentic analysis of each spring, also gives post-office address, access, and hotel accommodations.

New York Medical Journal. Edited by William T. Lusk, M. D., and James B. Hunter, M. D. Published monthly at $4.00 per annum by D. Appleton & Co., 549 & 551 Broadway, N. Y.

This Journal commences its 19th volume in January, 1874. It ranks among the first of American medical periodicals, and continues to give to its readers a large amount of valuable reading matter.

Clinical Electro-Therapeutics. By Dr. A. Hamilton. With numerous illustrations. pp 184. D. Appleton & Co.

This work is concise; its principles are illustrated by reported cases; and it seems to be the product of the author's experience with electricity as a remedial agent, brought forward as a guide for the practitioner. It is done up in handsome style

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OBITUARY.

Dr. Horace Hatch died October 28, 1873. He was born in Tunbridge, Vt., May 23d, 1788. He graduated

at Dartmouth College, in 1814; and studied medicine with Dr. R. Mussey of Hanover, N. H. He commenced practice in Norwich, Vt., and continued it there till 1837, when he removed to Burlington, Vt., where he practiced till 1852, when he withdrew from active practice. During the administration of Presdent Lincoln he was clerk in the Register of Treasury. From that time until his death his home was with his son-in-law, Hon. L. E. Chittenden, of New York City, where he died. He was an influential member of the Congregational Church in Burlington.

MARRIAGES.

GRINNELL—GUEST.—At Ogdensburg, N. Y., Thursday, Oct. 9, 1873, in St. John's Church, by the Rev. H. W. Beers, D. D., Ashbel Parmelee Grinnell, M. D., of Burlington, Vt., to Elizabeth Voseburgh Guest, of Ogdensburg.

CHASE—MEEKER.—At Burlington, Vt., Thursday, July 31, 1873, by Professor McK. Petty, Charles Edmunds Chase, M. D., of Deerfield, N. H., to Mrs. Nettie J. Meeker, of Burlington, Vt.

VERMONT

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Asiatic Cholera.—Its Prevalence as an Epidemic at Whitehall, N. Y., in 1849.—Observations on its Pathology.—Successful Results from the Opium-plan of Treatment.—By A. T. Woodward, M. D., Brandon, Vermont.

It was during the Summer of 1849, while a resident at Whitehall, N. Y., that the observations which I purpose to record in this brief sketch were made. The village had a population of about four thousand inhabitants, of which number many were foreigners of both Irish and French lineage. The village site is irregular; the base is a wedge-shaped, improved clay alluvium, from Wood Creek, a sluggish stream that, after halving the village, precipitates about thirty feet into what is called the basin, or the head-water of navigation on lake Champlain. A Potsdam sandstone protuberance four hundred feet high,

known as Skeene's Mountain, was intended by nature, for the eastern boundary, but with whose clever design the enterprising citizens have meddled in a remarkable manner by erecting cottages all the way up from base to summit, and so on over into sunrise. To the west a granite swelling five hundred feet high, has ever, and will forever, make sun-down an early advent. Without a swamp it boasts of a marsh one mile wide by fourteen long, including the northern part of the town. It is here that the Champlain Canal connects the waters of the lake bearing the same name with the waters of the Hudson River.

The epidemic atmospherical influences whatever they may be had not yet embraced this place when we were called to attend the first imported case. An agent of one of the transportation companies after a brief residence in Montreal where the epidemic prevailed to an alarming extent, soon after reaching his home, requested my services. For a period of several days he had complained of a slight fecal diarrhea, unattended by pain or vomiting. He was now confined to the bed with nausea and vomiting, and frequent large watery alvine discharges, with considerable prostration and cramps in the calves of his legs. The only distress or uneasiness complained of was referred to the calves, and a sensation of nausea. I did not at this time look upon the case as one of Asiatic cholera; to me it was cholera morbus, or sporadic cholera, as I was laboring under that lamentable mistake which has been the indirect cause of so many fatal terminations.

At this period in my experience I entertained the belief that, as a very common unbroken rule, a genuine case of Asiatic cholera commenced with nausea, vomiting and cramps, and watery alvine discharges, unattended by a prodromic fecal diarrhea; that nausea, vomiting, cramps and watery diarrhea were early symptoms in the attack, and I am sure the public so understood the matter, and it was to this mistaken view of the true course of the disease that we are to account for the great mortality that

waited upon the epidemic. When laboring under the early and seemingly harmless fecal diarrhea the victim in profound ignorance of its relation to the sequel, often spurned advice, or postponed doing any thing to obtain relief until exhausted by the discharges to such an extent as to excite nausea, vomiting and cramp. In the almost invariable order of sequence, we noticed, first a fecal diarrhea, not usually of an alarming character, which persisted for a period, varying from several hours to several days, according as the same was of a mild or severe type, and as it seemed to me, when the system was reduced in vital energy, to a certain point in consequence of the discharges from the bowels, the nausea and vomiting, and cramping, were established, and that the three last named symptoms, instead of belonging to an early stage in the disease were in fact the effect, and were often the penultimate phenomena of life. Therefore to postpone action until these symptoms supervened was a dangerous and frequently a very fatal mistake.

In this instance neither the patient nor physician was alarmed. As the stomach repelled every thing presented to it, it seemed necessary to resort to enemas, consequently, ten grains of tannic acid combined with one half teaspoonful of laudanum was thrown up the rectum, which was expelled and again almost immediately, in combination with half a chamber of rice-water. The quantity of laudanum was then doubled and together with another ten grains of tannin, thrown up the rectum, with no better success. Another dose containing two teaspoonfuls of laudanum and ten grains of tannin, was tried, and the patient restrained from getting up for a brief period, and the tormina was effectually overcome. The patient made a rapid recovery.

A few days subsequent to this time I saw, on invitation from a neighboring physician, an Irishman sick with watery alvine discharges, with little or no vomiting and no cramps, who was thought to have Asiatic cholera. Of his future history I only know that he died. I remember distinctly the impression it made upon my

mind. I was confirmed in the opinion that the man had no symptoms that were dissimilar to those we had treated during other hot seasons, and of course the disease was not Asiatic cholera. In a period of two weeks from this time I treated ten persons, similarly handled, by laudanum and tannin enemas. Whenever it failed to control the disease and it became necessary to repeat the enema, the quantity of laudanum was doubled, but the same dose of tannin was retained. If more than one repetition became necessary the rule of doubling the dose of laudanum was observed, with these ten cases the amount of laudanum required did not in a single case exceed at one dose half an ounce, when the necessary amount of laudanum was injected the tormina subsided, and was soon followed by subsidence of the vomiting and nausea. Suddenly the ball opened. One morning seven deaths were reported on the streets as occurring during the previous night, and from this time on for several weeks there was no dearth of cases.

Investigation soon convinced me of a fact that before this time I was not cognizant of, namely: that in, by far, the great majority of cases of Asiatic cholera, a fecal diarrhea persisted for a variable period before either nausea, vomiting, cramps or rice-water discharges appeared, and still further examination and investigation proved conclusively to my mind that Asiatic cholera is a fecal diarrhea differing in no essential feature from common fecal diarrhea except that the atmospheric changes in some way influences to a much more rapid course.

My experience with the first cases, which I had not recognized as cholera, having been satisfactory, I did not change my plan of attack after I had a better knowledge of its course and progress. I learned however, to be successful, the treatment pursued, to wit: laudanum (I say laudanum for subsequently I found that the tannin was of little or no account) must be with each repetition augmented by, at least, nearly its measure, and I repeat that when the requisite amount had been reached the tormi-

na, and subsequently the other symptoms speedily subsided.

I was led to reason that the peculiar state of the atmosphere predisposed to increased intestinal peristaltic action, which in the first stage of the disease simply emptied the nutrimental canal of its fecal contents, and when carried to a certain extent, caused prostration of the vital powers, and an approach to collapse, in which the blood vessels of the cavities (as shown by the cold extremities), especially those of the abdomen, were replete with blood, This repletion being the source of the serous transudation into the alvine canal (as seen in the rice-water discharges). The super-excitation of the ganglionic system stimulating the transudation.

I also believe that the intestinal peristaltic action associated with the tormina was augmented by hyperæmia of the spinal-center. I had daily occasion to observe that the laudanum, at first, arrested the desire to evacuate and that the tormina and peristaltic action were first arrested, and afterwards the other symptoms succumbed, while large astringent doses would not accomplish it. Blood-letting was advocated by some of the ablest men in Philadelphia, as a valuable remedy in Asiatic cholera, others extolled cathartic doses of hydrargyri chloridum mite. Both of these agents have peculiar merit, else such eminent advocates would not have been found.

Do all three of these agents: laudanum, calomel and blood-letting possess equal merit? That they overcome the symptoms of Asiatic cholera in some way is a demonstrable fact. Each in its peculiar way overcoming the symptoms health is regained. If we were quite sure of the pathology, if there was no doubt about the exact nature of Asiatic cholera, we would still be unable to give a perfectly unquestionable explanation of the way in which those remedies enter the system and dislodge the enemy. The best we can do is to conjecture. We know that taking blood from the system exercises a modifying influence over functional activity. How it could control intestinal peristaltic action in any other way it is difficult

to say. Much of the later intestinal peristaltic action in cholera must most assuredly be a reflex action under the stimulating influence of the excessive transudation into the nutrimental canal, to abate which the transudation must be arrested, and blood-letting directly diminished the preternatural hyperæmia of the cavities and also modifies and controls ganglionic activity. And it is to the existence of similar powers that opium and calomel owe their remedial action in this affection.

Are these three articles of equal potency in the disease, or do they possess comparative value? I think the latter is the case. Early in the disease, before there is very much reduction of the powers of life, the cathartic action of calomel, and the prostrating effects of venesection are better tolerated than they are later in the disease and after the system begins to sink from the exhausting effect of the discharges. There must be danger always in an exhausted state of the system in the use of articles that diminish vital energy. There exists no such objections to the use of opium, for while it modifies and controls functional activity in the ganglionic nervous system, it does not prostrate the powers of life, but on the other hand, it often increases vital energy.

There is a surprising tolerance of the article, opium, in this epidemic, that cannot be said of sporadic cholera. I have given two ounces of laudanum at a single dose per rectum, to more than one patient before overcoming the tormina, and I did not witness narcotism to a serious extent in any instance. My rule was to commence the treatment with a teaspoonful of laudanum with starch for a vehicle. If the distress to get to stool was unbearable the patient was permitted to do so, and immediately a double portion of laudanum was injected, and so on as often as the patient emptied the bowels of the enema another enema containing double the quantity of laudanum that the previous one contained was administered, and kept there by means of a sheet or something of the kind rolled up and put between the patient's thighs and pressed firmly against the anus to prevent its immediate return, in all

cases where the prostration prevented the person from helping himself through his will. With one person a physician.

I reached the enormous quantity of four ounces before the symptoms abated. (He had been an opium eater for many years previously, but I could not learn what his daily quantity was). There was one fact observed, for which I have no satisfactory explanation. I have remarked that I doubled the quantity of laudanum with each repetition of the enema; now it was observed that when the necessary quantity of laudanum was given the tormina subsided in a short period, a period seemingly altogether too short to admit of the absorption of so large a quantity into the system, not many minutes, rarely twenty, elapsed after the administration of the requisite amount of laudanum before the tormina was overcome, when no less than two ounces suffices, and that taking effect in twenty minutes it would seem that one ounce ought to have done as well, but it was not the fact. The physician to whom four ounces were given before the enema was thrown up, was pulseless, very difficult to rouse, answered questions incoherently, extremities icy-cold, and alvine discharges rice-water in character and passed involuntarily. In less than thirty minutes the pulse returned to the wrist, warmth to the extremities, clearness to the intellect, and an entire suspension of desire to evacuate.

Could four ounces of laudanum have been absorbed into the system in that brief space? I do not know. If laudanum has ever been found in the evacuations, made an hour or more subsequent to its administration, it would afford no proof of the impossibility of four ounces being absorbed under favorable conditions, in a much shorter period.

I would add that the rule of doubling the dose with each enema, was not observed after the first ounce was reached, some discretion was exercised. Sometimes an additional drachm or two only were added, and sometimes in great collapse a full ounce.

Report of a case of ovarian tumor, occurring on both sides.—Rupture of the right cyst, its subsequent absorption and calcification.—Rupture of the left cyst, followed by peritonitis and death.—By John M. Currier, M. D., Burlington, Vermont.

Mrs. Anna W., age 67; married; dark complexion and well nourished; usually been very healthy; has had six children. At the age of thirty-four her last child was born. At thirty-seven she felt a small tumor in the right side of the abdomen, quite low down, which increased in size until it was as large as an infant's head. She suffered with it more or less for three years, when suddenly she felt a giving away, and at the same time, the tumor disappeared. She had pain and tenderness in the bowels for some time following this, and her health was very slim for more than one year subsequently. She never discovered the tumor again, but slight soreness remained where it had formerly existed. Subsequently she regained her health.

At the age of fifty-five she began to have pain in the left side, which troubled her occasionally for several years. At the age of sixty-three she discovered another tumor in the left side just below the ribs, similar to, but a little higher than, the previous one twenty-six years before. This increased in size up to the time of her last sickness, and until she was so large she could not go about the house. Her bowels were more or less constipated; urinary secretion variously deranged at different times, sometimes scanty, sometimes abundant, and at others scalding and even painful. The functions of the stomach, towards the last, were also deranged, and her bowels became enormously distended, with œdema of the extremities.

On the 20th of August, 1869, she slipped and fell upon the floor hurting her very much, she soon began having severe pains in the bowels, nausea and vomiting soon came on, and continued till death, nothing could be re-

tained either as medicine or nourishment for one whole month. There was a high fever with great dyspnœa during this period. Rupture of an ovarian cyst was early diagnosed, and death was considered the inevitable result. The symptoms of peritonitis became more grave in character and she died on the 20th of September following. It was remarkable how long life lingered after the supervention of peritonitis of such unusual severity. Not one morsel of food or drink could be taken into the stomach without exciting vomiting. Thirst was intolerable. She lived one month in this condition, without nourishment being received into the system, either by the stomach or as injections into the intestines. Her mind was perfectly clear to the last. I never have been much of a believer in the efficacy of nutritive injections, therefore they were not employed in this case. Had they been resorted to by one who had confidence in them, this case would have been cited as a wonderful example of their utility in sustaining life when the stomach was incapable of digesting. The intestines were not in a condition to absorb nourishment, hence whatever was injected into them would have acted only as an irritant.

Autopsy eight hours after death. Temperature in the room 65° Fah.; cadaver rigid; head, chest, upper and lower extremities œdematous; abdomen enormously distended; girth four inches above the umbilicus forty-seven inches, from ensiform cartilage to umbilicus fourteen inches, from umbilicus to os pubis twelve inches. There was an umbilical hernia projecting one inch, having a diameter of three and one half inches. An incision was made from the ensiform cartilage to the os pubis through the walls of the abdomen, which were much attenuated. On opening into the peritoneal cavity a dark chocolate colored liquid immediately escaped, containing shreds of lymph and a flocculent sediment of a dirty white color. The entire quantity was forty-one pounds avoirdupois. The peritoneum was everywhere highly congested and many of the viscera were covered with plastic lymph. In the right side lay the ascending and a greater por-

tion of the transverse colon, distended with gas; on the left, and in the centre lay an ovarian cyst, somewhat attenuated at the fundus and right portion, projecting more internally than externally were numerous small cysts, from the walls of the main cyst, containing a glary fluid. The capacity of the main cyst was about one gallon. The external surface was smooth and shining, and along the upper border there was an irregular rupture through its walls seven inches in length. The following adhesions were noticed: the anterior surface of the main cyst to the omentum, to the contents of the umbilical hernia, and to the walls of the abdomen near the umbilicus, by membranous forms of plastic lymph; the fundus of the tumor to the transverse colon by four long round slender bands; to the left ovary by a broad thin pedicle; to the peritoneum just above the ilio-pectineal line on the right side by a small round band.

On the right side a hard irregular mass about two inches in diameter was found attached to the peritoneum near the ilio-pectineal line by a broad thick short band; it was connected to the cæcum by four round slender bands; to the ovary by a short slender pedicle; and to the abdominal walls by several small bands. This mass was covered with a bright shining fibrous structure which appeared to be, on cutting into it, a calcification, and from the similarity of its adhesions to those upon the left side, and from the history of her sickness thirty years previous, the inference is fair to presume that this was once a genuine ovarian tumor, and having been ruptured before it had attained a large size, it became atrophied and calcified.

The peritonitis developed at the time the first cyst was ruptured does not seem to have been very considerable, yet there was enough to produce disturbance in the digestive organs, and, consequently, ill health for nearly one year after. The adhesions to the peritoneum near the ilio-pectineal line must have taken place subsequent to the rupture during the absorptive process. The history of the case is valuable in diagnosticating rupture

of the cyst. The presence of a tumor in the side up to the time of the "giving away" the patient described so graphically, her inability to find it afterwards, and the soreness that lingered in the site of the tumor, point most unmistakably to the correctness of this opinion.

The uterus was of normal size and healthy. Kidneys healthy. In the gall-bladder were found fifty-three gall-stones. I did not learn that she ever suffered from the passage of gall-stones. Indeed most of them were too large for such an attempt. The coats of the gall-bladder were not distorted nor did they indicate that they had ever been irritated by the presence of the gall-stones. I will here digress a little from the main report to state that there was no cholesterine sand or grit, as it may be termed, found among the gall-stones, and it has been a common observation with me that there is none unless the coats of that viscus have been more or less attacked with inflammation.

In this case I advised an operation for the removal of the tumor, but there was a strong prejudice against it, on account of her age and from an unsuccessful attempt on one of her relatives. But from the slight adhesions that were afterwards found, and from the immunity the abdominal organs had acquired to withstand such lesions, there was not much doubt but that it would have been successful.

There is no capital operation at the present time better sanctioned by the profession in this country than that of ovariotomy, nor is there one attended with much larger percentage of cures, yet there are many cases, I have no doubt, that lose their lives from the prejudice the people entertain against this operation. The surgeon of course cannot warrant a cure, and for self protection must throw the responsibility of deciding to have the operation performed, upon the patient herself and friends. There have been cases within the circle of my acquaintance that lingered along from uncertain diagnosis, mildness of symptoms, and the want of proper encouragement on the part of friends, till it was too late for a successful operation.

The profession too need a little prompting in this matter, they could advise operations with much more assurance than they do, they need only to refer to statistics of numerous operators to see brilliant results.

Observations on Ozone, and its Relation to Disease.—By Hiram A. Cutting, A. M., M. D., State Geologist, Lunenburgh, Vermont.—Delivered at the fifty-third Annual Meeting of the White Mountain Medical Society, January 7th, 1874.—Published by Vote of the Society.

To the physician as well as to the chemist, or meteorologist, perhaps no subject possesses more attraction than that of ozone. Whether it is considered in relation to its supposed functions in the atmosphere, or its presumed connection with various diseases, or even the partial mystery of its origin, or if we speculate on its relation to oxygen we find it a subject of peculiar interest. When we commence investigations concerning it we start off under many disadvantages. Observers are contradictory in their statements, and it is a world of theory with only now and then an isolated fact.

The amount of ozone in the atmosphere is seldom if ever correctly estimated; like measuring the velocity of the wind we can approximate towards correctness; but to say that we can accurately determine the exact quantity would be at least a very doubtful statement. Yet this determination must be the foundation of all accurate knowledge in relation to its effects. Various methods have been employed to ascertain the presence of ozone in the atmosphere, among which are iodide of potassium with starch, and also with various other compounds,

Gum guaiacum, thallium, etc., all of which I have experimented with, but I shall speak in detail of one only. The iodide of potassium and starch is perhaps the easiest to manage, and with pure iodide free from iodate with which it is frequently combined, it may be prepared by dissolving one part of the iodide in two hundred parts of distilled water, to which solution ten parts of finely powdered starch may be added, and all gently heated until it is thickend like starch used by the laundress. In this solution while warm dip strips of bleached cotton cloth which have been thoroughly cleansed and previously dried, squeeze out the excess of starch and hang before a hot fire to dry. Cloth thus prepared should be white and quite stiff with the starch. Next cut in strips one inch wide and three inches long, and put up in ground stoppered bottles. In this way it may be kept any length of time desired. When wanted a strip can be removed and exposed in a sheltered situation, away from sunlight and manifest causes of impurity in the atmosphere.

A wooden box open at the top and bottom two feet long and four inches square, hung against a tree, I have found as good as any other more expensive arrangement. After proper exposure the color must be noted. I have adopted the scale of ten shadings, from the lightest tint to the darkest brown we ever obtain. This is the same scale adopted in Europe. Several exposures in different manners at the same time are desirable as by comparison your result becomes more valuable.

This test has been condemed by many, and I must admit that it requires attention to remedy its defects. The most grave is the combination of iodate in the salt used which may be detected by tartaric acid. This disengages from the iodate hydriodic and iodic acids, which immediately react on each other producing free iodine and water; while tartaric acid has no immediate effect upon the iodide beyond the slow formation of hydriodic acid. This if long exposed will combine with oxygen from the atmosphere producing water and free iodine. When, however small a trace of iodate is present discoloration

immediately takes place proportionate to the amount. Again dampness hastens the discoloration and so the relative humidity should be taken into account. Iodate of potassium may form on your test strips and prevent discoloration, being exactly equal to what would have been set free by the ozone, provided no iodate had been formed. This may be counteracted and the iodine set free by a spray thrown upon the test from a solution of tartaric acid by a common atomizer and you will then have the proper shade.

I have entered this much into detail to show how observers by want of proper care may have fallen into errors, and thus have arisen the contradictory opinions expressed by various writers. What ozone is has but recently been established; but thanks to Andrews and Soret as well as other eminent men that have lent their aid to our present knowledge, which enables us to state that ozone is a condensed or allotropic form of oxygen, and they are mutually convertable the one into the other without the production of any other body.

Ozone is active as a disinfectant or deodorizer removing all noxious odors; but it is also an active oxidizer of metals. Silver or even gold is tarnished by it. To show its purifying power I will detail one experiment which any person can repeat at will. I know of but one substance more offensive than putrid flesh, and that is putrid blood. Yet blood may be exposed to the atmosphere until quite putrid, and the clot softened then put in a bottle where after some time the clot will dissolve as a result of alkaline decomposition. In this state you cannot imagine a more offensive fluid; yet by passing a current of ozone through it or even over it, the bad smell will all pass away or be neutralized rather; and the mass will become quite sweet. From this you can see that ozone is an active agent that under the directing power of man may accomplish much.

How large a part it plays in the production of edible products from old bones, and other nauseous substances, I do not pretend to know. As ozone is not a natural

condition of oxygen of course its production concerns us, and how it is produced in nature; and how it may be produced so as to be of use to the physician, chemist or manufacturer is of great importance. In nature the oxidation of metals, the decomposition of rocks, the germination of seeds, the growth of plants, especially the atmospheric algæ, the falling of rain, hail, or snow, the evaporation of saline fluids, the dashing of the waves of the ocean on the coast currents, in the atmosphere clouds and many other of the phenomena of nature, are all concerned in the simultaneous production of electricity and ozone. The French Academy have ascertained that much ozone is developed under the action of blowing machines. This may in part account for the healthful action of winds.

As ozone, to be of advantage to the physician, must be developed at his will, I will state that it is easily produced by the electric current as follows: A sufficient battery is required to give an inch spark with a coil. A glass tube about two and a half feet long having a half inch bore at one end and near the other contracted to one-eighth of an inch. Pass a wire from the coil into the large end of this tube and out at the side near the point of contraction. Melt sealing wax around the wire so as to prevent the air from passing in or out at the side of the tube, but leave the ends open. Coil the other wire from the electric coil around the outside of the tube following the tube down to the point of exit where connect the wires, and pass the current of electricity. By passing the air through this tube slowly the oxygen will be changed to ozone. The conducting wires from such a coil will always give more or less ozone which, in a common sized room, can easily be detected by the smell. It is thought that one-millionth part of ozone in the atmosphere can be thus detected.

It has a pungent smell which has been compared to the smell of sulphur. By rubbing a rubber comb ozone and electricity will both be evolved and you can thus get the odor distinctly. It can frequently be observed

in a building after it has been struck by lightning. It was observable four weeks afterwards in a house in Kirby struck by lightning two years ago. It is sometimes faintly perceptible during or after thunder storms as I have myself twice observed. If an electric coil is not at hand so you can take advantage of electricity, you can readily produce ozone by the action of strong sulphuric acid upon permanganate of potassium. It is only necessary to mix very gradually three parts of the acid with two parts of the salt, and this mixture will not only give off ozone abundantly but will not cease to give it off for months. You will at once see that in this way it can be introduced into any invalid's chamber when desirable, and it can thus be used for the purification of the air of hospitals or public assemblies.

As it is evolved by electricity and also by chemical action it would seem almost certain that it would be a constant ingredient of our atmosphere. As we have seen it is by no means a passive agent and the query will at once arise as to its effect upon animate nature. The result of my experiments as well as that from the experiments of others, show that an ozonized atmosphere will produce an irritation of the mucous membranes of the nostrils, throat, conjunctivæ, and even congestion of the lungs. It accelerates respiration and circulation, excites the nervous system, and those effects continue after the withdrawal of the cause.

Of this I have had ample experience, and will say that when following up experiments upon ozone for some days, I had an attack akin to pneumonia which came near being serious. I was attended by Dr. Fulsom who can state that the active stage of inflammation was very severe, though the recovery was rapid beyond precedent. I did not then realize the cause, but have since observed the results too often to be mistaken. Not that I intend to take averdoses of ozone but in experiments with it enough escapes into a room when closed as in cold weather to produce these effects.

Reasoning from this we should infer that a class of dis-

cases with such a diagnosis, might have their severity increased by a an increase of ozone, even if an increased amount did not induce them. Further as ozone is fully settled to be one of the elements of our atmosphere a want of, or a minimum quantity of such an active agent might cause diseases of an opposite character.

As ozone increases in amount according to elevation for at least two thousand five hundred feet, and some observers say to four thousand feet in inland sections, and as the sea breeze is much more ozoniferous than land breezes, we ought to find the following results: That influenza and all catarrhal diseases of the mucous membranes and lungs, should be more fatal on our hills than in our valleys, especially on our low streams; while cholera and all diseases of that character should be less fatal on high land. We cannot suppose that those diseases can actually be prevented or induced by the small amount of ozone in the atmosphere, but every thing else being equal the predisposition from the same causes would doubtless be accelerated or retarded by the want of, or excess of ozone.

This subject is one of extreme interest both to the physiological and pathological student. A systematic attempt should be made to ascertain if this body, so energetic in its affinities, and so powerful in its actions, possesses when artificially prepared any remedial virtues in diseases; especially those of suboxidation, such as diabetis, the lithic and oxalic acid diatheses, etc., as well as in catarrhal and choleraic diseases. Science does not at present enable us unfortunately to make any positive statement as to what is, and what is not, an unhealthy atmosphere.

The germs of epidemic diseases so much talked of, have never been fully identified, but if they exist, ozone as nature's most energetic disinfectant, should purify, and necessarily must decompose much of the deleterious products of putrefaction, and it would stand to reason as ozone is found at once to destroy rudimentary germs of vegetable life, that if such germs for the production of

disease really exist, it would have a strong tendency to destroy them. Reasoning from this, epidemic diseases should be more virulent when ozone is in the minimum amount, but there are contradictory opinions about such being the case.

It is said that variola in Europe has assumed its most malignant type when ozone was in medium amount, but perhaps it was never more persistent and epidemic, or fatal in its results, than it was in our cities last winter, with ozone at minimum. Then again the country is frequently well supplied with ozone when our cities are entirely deficient, and even in Vermont we may have for a time an abundant supply in one part of the state, with but little in another. From this you can see the uncertainty of conclusions based upon anything but absolute observation at the time and place of such epidemic. And then without experience with such tests as are valid, observations are of little worth.

When I commenced observations, after an extensive correspondence with those whom I presumed were authority in the case, at considerable expense I had a tin aspirator made according to the most approved plan, with brass stop-cocks and connections. I always had ozone uniform in amount, and doubtless developed by the combination of metals giving a galvanic current. Deductions from such observations of course would lead to error. Now we have thus far from experiments reasoned out our conclusions. They are of no worth unless sustained by positive fact, and here comes our difficulty; there is great variation in the statements of different observers.

But I will bring forward a few instances where there seems no doubt but what the ozone was properly estimated; as it was so estimated by men of eminence and experience. In 1866 cholera destroyed in England alone ten thousand three hundred persons, and during much of this period of sickness ozone was at its minimum, and for the whole time it was not above three on a scale of ten. Cholera is always found to decrease and ozone to increase

with elevation; all admit this. In the countries of Europe, several times a want of ozone has marked cholera epidemics. Morasses and stagnant water are absorbents of ozone, and as a rule it does not exist around them. They are admitted to be unhealthy places, especially in times of dysentery or cholera morbus.

In the English cattle-disease of 1866 almost all the cattle died in low situations and about the cities where there was no ozone; but in the hill country where ozone was four on a scale of ten, few if any died. The Highlands of Scotland were not only free from the cattle-disease but free from cholera, with ozone at four and one half. This was certainly a peculiar coincidence if ozone had nothing to do with it. On the other hand we find that sea breezes of New England are more strongly impregnated than the atmosphere inland, and such sea breezes are a disadvantage to consumptives, and are productive of much catarrh. Diphtheria in Europe and America has always appeared as an epidemic when ozone has been above five in our scale, or at its maximum; and as the amount of ozone has decreased, this disease has not only decreased in fatality but in frequency also.

But as you all have the same access to authors on the subject that I have, I will not bring forward illustrations from them but speak of my own experience. First: that from three to five has shown a general state of health. Second: that below that standard choleraic diseases with dysentery among children have predominated. Third: that above that standard catarrhal and inflammatory diseases have taken precedence, yet during all this period now and then a case would appear in contradiction, or in other words the classification has not been exclusive.

But let us review this period. In 1871, in January and February there was a medium amount of ozone, with now and then sickness from special causes, but nothing that would seem to depart from what would be termed a healthy condition, until March, which was peculiar for the rapid spread of mumps. (Ozone three to four). As the spring opened there were slight catarrhal diseases,

following the increase of ozone until the twenty-fifth of May, when there were several severe cases of pneumonia, most of which experienced recurrent attacks. This predisposition to lung disease continued nearly up to the first of July, passing into a period of general health, following in August with dysentery (ozone five) among children, which gradually increased until many adult people were sick with cholera morbus, and at length it assumed a fatal form, carrying off in this section several oldish people, death being preceded by convulsive attacks, general in their nature, about forty-eight hours after the commencement of the disease. (Ozone one).

The last of September this disease assumed a more manageable form and soon disappeared entirely, but in a few days, or by the fifteenth of October a large majority of the people were suffering more or less from catarrhal difficulties, which they denominated cold in the head. (At this time ozone was at nine). This state of disease continued with now and then a case of pneumonia until December, which was a month of general health, (with ozone averaging five). In January 1872 there was much whooping-cough. but with that exception little disease and general good health prevailed. Through the summer there were no typical diseases. (Ozone about medium).

The last of August a few cases of cholera infantum occurred, but none were fatal. There was an occasional case of lung fever in November, with the horse-disease or epizootic all about us, but it did not reach Lunenburgh until the fifteenth of November and was at its hight about the twenty-fifth. (Ozone nine). It seemed to appear in central Vermont first and with greater severity which would accord with ozone here, but it seemed more fatal in our cities which are generally deficient in ozone, yet might have had an excess at that time. Of this, for the lack of observers there, I am unable to state.

This disease seemed to be almost identical with influenza in man, and in fine almost every person claimed to have a touch of it about the first of December. (Ozone was ten). This passed into a general condition of health

with a recurrence of whooping-cough in January. Observers in some sections, especially in Masachusetts, reported a very small amount of ozone for January and February. We all know that variola was epidemic as never before in and around Boston. This accords with observations in Europe which show this disease peculiarly sensitive to ozone (which here was three as an average). The last summer has been a remarkable time of good health, not only in Lunenburgh but I understand it quite generally so through this section.

The last of July and the first half of August was marked by several cases of cholera infantum, followed by pneumonia and catarrhal diseases in October and November, with a remarkable increase of ozone the last of November, about the same even as last year during the horse epidemic, and I expected a reappearance, and I find many horses were affected somewhat.

Since the excess of ozone catarrhal affections have predominated. If these observations do not show any thing definite they certainly show more in favor of our theories than against them, and though in this utilitarian age some may think ozone of little consequence, and ask of what use it is to observe it; yet I trust that most of the medical fraternity will give it due consideration, and unite your efforts with my own in marking the changes in the type of your cases, and communicate to me your results. If you will thus aid me, I will from time to time test for ozone in the locality of special diseases, and we can thus hand in hand by years of observation determine what we can only now see in the possibilities of the future. Should some of those possibilities prove true our observations may be of benefit to mankind.

Ozone may be absorbed in large quantities by cod-liver oil; and may it not thus be of use under some circumstances? Again might it not be worth while in choleraic diseases to try its inhalation, and see if the inflammatory action upon the mucous membranes does not mitigate the prior disease?

Ozonized oil injected in quadrupeds increases the action

of the heart; is it possible it might thus in some cases avail something for man? It is now used extensively in Boston to destroy the empyreumatic taste of whiskey. Its action on diluted spirit is to bring into existence the acetic fermentation with great intensity especially if any sugar be present. Can we not gain hints from effects thus produced by which we can make it useful?

Sphacelus of the Left Cheek, with Necrosis of the Left Superior Maxillary Bone, following Typhoid Fever. —Reported for Publication January 26th, 1874.—By Geo. Dunsmore, A. M., M. D., St. Albans, Vermont.

William B., aged 18, of previous good health, of fine physical development and free from any constitutional taint, was attacked with typhoid fever on the 10th day of November, 1873. For the first week the diarrhea was rather profuse but easily controlled, tympanitis slight, epistaxis frequent and copious, body heat increased at a daily average of one degree until the evening of the seventh day when it reached 106°, and on the following morning 105.5°.

Second week: temperature 105° to 106°, pulse 88 to 90 and dichrotic, tongue moist and covered with a thin white coat, respirations 24, bowels regular, feces almost normal, Third week: temperature as in the second, pulse more frequent, tongue dry at the tip, bowels regular, feces normal, tympanitis slight, bronchial cough with some expectoration, hearing impaired in the left ear, respirations about 26, delerium almost constant. Fourth week: temperature as in third, pulse 112 to 120, expectoration tenacious and quite copious, much low muttering deliri-

um with subsultus and picking at the bed-clothes, tympanitic resonance very marked, hearing much impaired in both ears.

Fifth week: deafness total, first sound of heart inaudible, discharge of pus from both ears, intestinal hemorrhage frequent but not copious, delerium less, pulse 130, respirations 48, temperature 103°, expectoration diminishing. Sixth week: hearing improving, intellect clear, tongue clean and moist, pulse intermittent and difficult to count, prostration great, bowels regular, feces normal, temperature 100°, emaciation extreme, apetite improving. It was during the latter part of this week when I supposed my patient had passed the rubicon of his complications that I discovered on the inner side of the left cheek over the point of articulation of the malar and superior maxillary bones a small sphacelated spot which in forty-eight hours extended over the whole cheek proper, or to be more definite, over that portion of the face which covers the superior maxillary bone.

In a few days this diseased structure separated from the surrounding healthy tissue and was removed in mass, exposing the dark necrosed superior maxillary bone. During the sloughing stage of this complication my friends Drs. Fasset, Clark, and Comeau of this place saw the case with me. About this time an abscess formed in the gluteal region of the same side from which escaped a quart or more of dark sanious pus. In the vicinity of this abscess were several large painless boils which matured very rapidly. On the 12th of January, 1874, I removed, using but little force, the entire left superior maxillary bone.

He is now, at the end of the eleventh week, rapidly recovering. His hearing is perfect, but his power of articulation is almost totally destroyed, and he can neither retain in his mouth nor swallow liquids or solids without first closing up the great chasm in his face.

In this family of eight seven have taken the disease. Two have died, one 51 and the other 12 years of age, the former in the seventh week, from intestinal hemorrhage.

the latter in the fifth week, from paralysis of the heart. In four there was delirium, dry tongue and, at some stages of the disease, diarrhea; in one extreme constipation throughout; in three bowels regular with feces either hard or consistent. In all there were bronchial rales, deafness, tympanitis, rapid pulse, but most marked of all was persistent high temperature, the thermometer standing for three weeks in some of the cases at 106° and that too when no other symptom was alarming. In none was there the rose colored eruption, petechia, sudamina or ileo-cæcal gurgling, and in none did convalescence begin under four weeks, most of the cases lasting from five to seven weeks. Another fact worthy of note is that the last cases were as severe as the first, the two extremes dying.

The subject of this sketch was treated during the first eight days with iodine, using Willebrand's recipe: ℞ iodinii gr. vj, iodidi potassii gr. xij, aquæ f℥j. M. Dose, four drops every two hours in a wine-glassful of water. On the ninth day I commenced the use of sulphate of quinia in two grain doses every five hours and continued it alone until the first sound of the heart became indistinct when I added to each dose five grains of carbonate of ammonia and two of gum camphor. This, with occasionally dover's powders to procure sleep, nitre to stimulate the kidneys and hemostatiques to arrest hemorrhage, constituted, in the main, the constitutional treatment.

The local treatment of the sphacelus consisted in the constant application of cloths wet in a saturated watery solution of bromine until the line of demarcation formed. To promote granulation balsam of peru was used.

That this local necrosis was due to the septic influence of the typhoid poison is, to my mind, an untenable assumption. I can only regard it as due to obstruction of the facial artery or vein or both. That it did not result from embolism due to vegetations washed from the valves of the heart is evident, as the heart sounds were unembarrassed. That it was due to a blood-clot resulting from

a partial syncope which preceeded by several days the sphacelus is by no means improbable. Or that it may have been due to an arteritis of the facial artery by which its caliber was occluded is not at all utopian. But be its cause what it may, I cannot for a moment entertain the proposition of its necessary relation to typhoid fever either as an accompaniment or sequela.

Improvements in the Vermont Asylum for the Insane. —A Letter addressed to the Editor from the Superintendent, J. Draper, M. D., February 14th, 1874.

Dear Doctor.—I am able to report satisfactory progress in our current affairs. Our number of patients is 462. General health of the household, good. Mortality for the year 1873, 24. We have occupied the new wing for females, and vacated the entire basement story of the female department. The new wing for males is nearly ready for occupancy, and will be opened next month, and the basement of the male department will then be discontinued for use by patients.

The new wings are substantially built of brick, upon stone foundations, and have the best facilities for heating and ventilation; each room having a flue by which it can be separately warmed, and another for ventilation, connected with a foul-air shaft, which will act as an exhaust force. The water-closets and bath-rooms are fitted with all necessary modern fixtures and arrangements. Each wing is thirty-five by ninety feet. The old wings have been improved by building out projections in front, and throwing open for an alcove or sitting-room, a space sixteen by eighteen feet, which greatly adds to their cheerfulness.

The Boiler House, with chimney stack eighty feet in hight has been erected, and the boilers, four in number, have been placed in position. The old wings will be modernized, and renovated as fast as practicable, and the ventilation will be forced by means of a fan. Steam cooking apparatus will also be introduced, with the heating arrangements.

All these changes would have been made earlier if the Institution had had the means. The introduction of steam-heating was being arranged for in 1862, and materials contracted for partially, when the fire occurred which destroyed near one half the buildings. All surplus means, as well as amount received on insurance, were consumed in rebuilding, and a debt incurred which had to be liquidated before further improvements could be made. The amount received for support of the Transient Insane, and State Beneficiaries, ($3.00 per week), is actually at present below the average cost of support, and is a matter which demands consideration.

A Case of penetrating and perforating gun-shot Wound of the Thorax with Lodgment of the Ball.—Reported by E. S. Peck, M. D., Secretary of the Board of Examining Surgeons for Pensions, Burlington, Vermont.

Notes of this case are taken from the various examinations made several years after reception of the wound. Private ——, Company A, Sixth Regiment Vermont Volunteers, received a severe and extensive penetrating and perforating wound of the chest in the War of 1861. His physical description at this time is as follows: Age, 26 years; hair, black; eyes, dark brown; height, 5 ft. 6 in.;

weight 160 pounds; complexion dark; general appearance healthy; body well nourished.

History.—While on the field of battle, and in the act of taking a percussion cap from the box attached to the belt and resting upon the right hip, he was struck by what is supposed to be a Minie ball just above and a little posterior to the external condyle of the right humerus, exactly over the corresponding ridge. The ball traveled up the arm underneath the external portion of the biceps, and emerged from the inner side of the arm about half an inch above the level of the brachial artery in this locality. Evidently the point of exit of the projectile, and the axis of the artery were separated by the little slender muscle, coraco-brachialis, lying upon the inner border of the biceps. The ball then struck the thorax in the fourth intercostal space, penetrated the thorax, perforated the upper lobe of the right lung, traversed the posterior mediastinum, perforated the upper lobe of the left lung, finally emerged from the chest through the third intercostal space, and is now lodged in the lowest fibres of the great pectoral muscle of the left side.

The man lay in hospital for several weeks; after a tardy convalescence he made a perfect recovery, so far as the closure of the internal and external wounds is concerned. The wound of the right arm healed without any serious complication, establishing the fact of entire absence of injury to the brachial artery. Occasionally for two years, granules of bone found their way through the upper wound, since which time there has been no reopening whatever.

The long detention in the hospital was occasioned by sudden attacks of hæmoptysis, traumatic pleuritis, and the shock consequent upon such severe wounds.

Notes of recent examinations of this soldier are as follows, September 5, 1871: Respiration 24; pulse 88; weight 156 pounds. Efficiency of the lungs is somewhat impaired, causing shortness of breath upon much exertion.

September 6, 1873: Respiration 18; pulse 72; weight 155 pounds. This remarkable wound remains as before; ball is still lodged in large pectoral muscle of left side in anterior portion of the base of the axillary triangle. Occasional attacks of hæmoptysis on unusual labor. January 7, 1874: Respiration 20; pulse 100; weight 165 pounds. Applicant occasionally suffers from dyspnœa and hæmoptysis. Though in fair flesh he cannot endure severe manual labor. Ball remains in left pectoral muscle, and is not a source of irritation. Cicatrices, three in number, two of entrance and one of exit, are healthy.

The symptoms of profuse bloody expectoration and vomiting, together with the traumatic pleuritis which immediately and for some time after, succeeded the reception of the wound, are regarded as proofs of its perforating character. The absence of these symptoms would indicate the passage of the ball to be under the integuments and fascia, and circular in direction.

The statistics of military surgery make a marked difference in the fatality from circular and perforating wounds of the chest. Obviously, the ball traversed the posterior mediastinum, posterior to the ascending aorta, and superior to the roots of both lungs.

A Case of Hypospadias.—Reported by W. B. Lund, M. D., Burlington, Vermont.

An interesting example of this somewhat rare malformation of the urethra has lately come under my observation in this city. The deformity was noticed soon after the birth of the child and consists, as the name implies, in a *drawing under* of the orifice of the urethra. On examining the organ, one is struck with its arched appearance.

Instead of projecting directly from the pubis and throwing the stream of urine forward and away from the body, it is bent backward and downward, as if the base of the glans at the frænum was fastened to the scrotum, and the urine was directed downward and backward, and courses along the front of the scrotum.

The corpus spongiosum is the structure that is at fault. The failure of this portion to develop is what produces the contraction and shortening back of the urethra, and causes the bent or arched appearance when viewed from above. The glans is diminished in size, and, by being drawn down, away from the prepuce, is uncovered. The urethra terminates in a slit, three-eighths of an inch in length, at the frænum just anterior to the scrotum. From that point the corpus spongiosum is insufficient to enclose and prolong the canal to the proper length. The genito-urinary apparatus is in other respects perfectly developed and the child strong and well formed.

There are two other children, boys, in the family, who exhibit no deformity. The parents are Irish and appear healthy, well developed, and claim that all the members of their respective families are free from any malformation.

Notes of a Monstrosity in a Calf.—Reported by J. L. Chandler, M. D., St. Albans, Vermont.

At St. Armand, Lower Canada, in 1829, I was requested to examine the body of a calf, said to have "grown, inside out." The cow had died during ineffectual efforts to expel it, without anything remarkable having been previously noticed. I cannot better convey a distinct idea of the appearance of this "sport of nature", than by the following method: Conceive to yourself a full

grown fœtus of perfect development, with the substitution of some tenacious pliable material, instead of bone. Make an incision into the abdomen, from the ensiform cartilage to the pubis; fold the head, arms, and lower extremities upon the back of the fœtus, and turn it (the abdomen being opened for the purpose) inside out; and suppose, if you please, a reunion of the incision, and perfect ossification to occur. You will then have put the peritoneum in place of the skin, and the skin in place of the peritoneum. On the external surface of this metamorphosis, you will find, loose and floating, the liver, (out of which will be seen emerging, the funis), the spleen, stomach, intestines, and urinary bladder.

The cavity of the chest will be hidden but in making an incision into the shapeless mass, where you may feel the projecting spinal column, you will cut through the diaphragm, and expose the heart and lungs. On the other side of the mass, you will cut into a cavity where you will find snugly coiled, the head, arms, and legs; a cavity which will seem better fitted for the liver, stomach, and intestines. So at least thought I, as the well haired head, neck, legs, and tail of a full grown calf presented to view. The anus, of course, had its exit in this cavity.

Sudden Death.—Inquest.—Post-mortem.—Reported by John M. Currier, M. D., Burlington, Vermont.

About six o'clock P. M. on the 20th of January, 1874, I was requested by a young man to see his father, (Mr. P. D., an Irishman), who, he said, had just had a fit and was found in the back yard in an insensible state. On entering the kitchen I found the man lying on the floor

on his back; he was dead, though the temperature of the body was about natural, the extremities however were cold.

I learned from the family that he went out about one half hour previous to go to the house of his son living in another portion of the city. He was next found by one of his neighbors, lying on the frozen ground near the back door. He was brought in, but I could not learn that he breathed after he was found. He was about seventy-four years of age, and had been in feeble health for several years, but was in his usual health on the day of his death.

The next day it was reported that early in the evening one of his sons came home intoxicated, and had some altercation with the father that resulted in his death. This led the authorities of the city to investigate the matter; accordingly Dr. A. P. Grinnell and myself, the following morning, conducted the

AUTOPSY, thirty-eight hours after death; cadaver rigid; weight about 150 pounds; no œdema; back and shoulders evenly ecchymotic; small bruise of the skin on the nose with extravasation; one ecchymotic spot above the left eye, but the skin was not broken; another one on the left cheek with bruise of the skin; none of these were above one half inch in diameter; a large one on the back of the right hand with very dark extravasation; this was said to have been produced several days previous by a burn. Thorax: no adhesions of the pericardium; sac contained about one and one half fluid ounces of clear serum; heart normal in size, left ventricular walls normal in thickness, but much softened, easily broken down between the fingers; one aortic valve was ossified, but not hindering the proper performance of its function; otherwise the valves of the heart and the endocardium were healthy. The walls of the right ventricle were much firmer than the left but softer than in health. No coagulated blood was found in the heart or large vessels. The arch of the aorta was four inches in cir-

cumference, and with the exception of a few ossifications was healthy; all the other vessels leading to, and from, the heart were healthy. The pulmonary veins throughout both lungs were engorged with coagulated blood, but otherwise the lungs were normal. Calcification of the bronchial glands was observed, but there was no interference with the proper performance of the functions of any of the surrounding structures. Abdomen: only the stomach and a portion of the intestines were examined; they were healthy. The brain was not examined.

Conclusions.—Paralysis of the left side of the heart, causing engorgement of the pulmonary veins, and cessation of the functions of every organ in the body from the want of blood-supply.

Remarks.—Sudden deaths are quite apt to be explained as being caused by "apoplexy" or "heart disease," by the people, but the medical witness, on whose testimony lives often depend, must have something more tangible than mere presumption, as the basis of his conclusions. Often an autopsy reveals nothing definite, or but blindly, that can be relied upon as testimony in a court. The case just reported is an example wherein a question may be raised relating to its pathology. There was only the softened condition of the left ventricle, and the coagulated blood in the branches of the pulmonary veins, that led to the conclusion of sudden cessation of ventricular contraction of the left side of the heart.

The previous history, however, would strengthen this view of the case; he was a man in feeble health, could not ascend a flight of stairs, take a hasty walk, or endure excitement of any kind, without being out of breath, and easily fatigued. The walls of the right ventricle was firmer than the left, and it may be presumed that it continued its pulsations some time after the cessation of the eft. This would explain the engorged condition of the pulmonary veins. The blood was forced into the lungs by the continued contractions of the right ventricle; and

at the same time the cessation of contraction of the left ventricle, would cause a daming-up of the blood behind it. These conditions, then, afford the most plausible evidence of the mode of death, whatever may have been the exciting cause.

A question may be raised whether this man died from apnœa. Had this been the case the engorgement would have been in the pulmonary arteries instead of the pulmonary veins; the obstruction would have been in the capillaries of the lungs instead of the dilated left ventricle. The right ventricle would have been the first to cease its action from its inability to force the blood through the capillaries; the superior and inferior venæ cavæ would become distended; the general surface would have assumed a purplish hue from venous congestion.

Another more important question, whether the cause of death was from shock, may be propounded to the medical witness. How much depended on the muscular softening and nervous paresis of the heart, and how much upon the violence received during the altercation, and from the fright and excitement connected therewith, in the production of this death, is a question not easily answered.

I testified before the court of inquiry: that death would not have been produced from either cause alone; that the heart was liable from any excitement at any time, to suspend muscular contraction; that had not this cardiac condition existed death would not have ensued; and had not this excitement occurred he would in all probability lived longer.

Dr. Grinnell, who examined a portion of the muscular structure of the heart under the microscope, found no fatty degeneration nor infiltration whatever. This fact, with the other observations go far to establish that the nervous centres connected with muscular contractility of the heart was the structure primarily diseased, and following this an atony of the muscular structure resulted; doubtless fatty degeneration would soon have followed.

These cases in whom sudden death is likely to occur, cannot be easily distinguished previous to death. In a great majority of the cases that have come under my observation death was wholly unexpected.

Arrest of Development of three lumbar Vertebræ and the Bones of the Skull.—By H. H. Langdon, M. D., Burlington, Vermont.

On December 1st, 1873, I attended Mr. ——, in her third confinement. The case presented no unusual characteristics except, that it was a breech presentation, and of fourteen hours duration. Upon the back of the child was something that at first sight somewhat resembled a tumor. It was about two inches in diameter, and situated in the region of the lower lumbar vertebræ. The surrounding skin appeared healthy, while that over the tumor, which was elevated one half inch above the skin surrounding it, seemed to be nothing but cuticle, and was of a purple color, from which exuded bloody serum. There seemed to be absent three of the lower lumbar vertebræ. I could, and did very easily introduce the blunt end of my probe through this cuticle and into the cavity of the abdomen.

In addition to this every suture of the skull was open from one half to three-fourths of an inch. To all external appearances the child was perfect, with these two exceptions. The child was alive an hour previous to its birth. Its weight was eleven pounds. It is strange that the nutrition of the child should be so perfect, while these two abnormal conditions existed to so great a degree.

Editorial.—Registration Report of Vermont.—Medical Societies.—Brevities.—Obituary.—Marriage.

EDITORIAL.—The readers of this Journal may wish to know what its prospects are at this issue. The reply must be that the enterprise is gradually receiving encouragements from every source. It was not expected to be a very lucrative business to begin with, but hopes are entertained that it will eventually become sufficiently remunerative to do something more than simply pay current expenses. It was a very inauspicious time to commence such a publication, but it had been announced that it would appear, preparations having been made for the prosecution of the work before the "financial crisis" took place, and it was thought best to go on, as it would incur a greater loss to remain idle than to proceed with its publication through all the difficulties that must arise.

The "panic" has forced the physician, as well as other classes, to economize, and to cut-down all expenses possible, so his medical periodicals not being an absolute necessity, in many instances, have been discontinued, and much less would he think of subscribing for a new one. The Vermont Medical Journal has not, of course, a class of readers who have been accustomed to peruse its pages, and not having acquired the habit of receiving it regularly feel no need of it. Patients get accustomed to certain physicians and do not like to change, so physicians get accustomed to reading particular journals and dislike to try new ones. A thirst, it is hoped, will be created in the minds of the medical fraternity throughout the State, as well as elsewhere, that will redound to the financial

interests of the Journal at some future time. Perseverance is necessary to success in all things.

Much credit is due to all those who have had the matter under consideration for the very kind feelings that they have manifested toward the Journal, and for the deep interest that they have taken in its continuance. It is hoped that such friendly feelings will continue.

The editor desires the secretaries of the various district and county medical societies of the State to forward to him a full list of the officers of their respective societies, as soon after election as possible, giving name and residence of each one. Extracts of the papers, cases reported, and important business transactions, are also requested for publication. Such matter is often of great value to the profession, and it always shows that somebody is alive, if nothing more.

More interest should be felt by the physicians of the several counties of the State to have each a medical society. There exists no better place for the country practitioner to improve in the practical knowledge of medicine, or to impart it to others, than in these small local societies. There is no better place to melt away petty jealousies, that always reflect the most unkindly on the possessor, than in these little circles.

Some have complained of the terms of this Journal because it requires advanced pay. Previous experience in journalism has convinced the publisher that there is no safer way for himself, nor any better one for his subscribers. Arrears on periodicals, if paid at all, are done so very grudgingly by a large majority. If a subscriber takes a journal that stops at the end of the year unless the subscription is renewed, he can have the assurance that the publisher will endeavor to furnish his readers with such

matter as shall induce them to renew their subscriptions for the second year.

The editor intends to publish a Complete List of the Regular Physicians of Vermont, as soon as it can be perfected, and would request the physicians to send in their names in a clear hand, with post-office address and residence. It would hasten the work if one in every town would send in the names of all the others residing in his own town, and would be more likely to be correct. The value of such a list will be readily appreciated by all.

Fifteenth Registration Report of Vermont, 1871.—The whole population of the State in 1870, was 330,551. During the year ending December 31st, 1871, the whole number of births in the State was 7,239, of which 3,700 were males, and 3,117 were females, sex not stated in 22. Of plural births there were 145, one being a case of triplets; 84 were males, and 61 females. Illegitimates 56, of which 31 were males, and 25 females; still-born 193, of which 108 were males, and 68 females. Of the whole number of births 4,757 were American, 2,277 foreign, 205 unknown.

During the same period there were 2,742 couples married. The number of divorces granted by the courts were 203; in 140 cases the wife was the libelant, and in 63 the husband.

Whole number of deaths in 1871, was 4,507; males 2,249, females 2,214; 3,886 were of American parentage, 386 of foreign, and 253 unknown. The causes of death were enumerated as follows: consumption 809, pneumonia 306, old age 302, heart disease 247, fevers 223, scarlatina 185, cancer 149, paralysis 128, dysentery 90, cholera infantum 62, diphtheria 32, gangrene 5, and purpura, cyanosis, embolism of the femoral artery, and intemperance, 1 of each.

The statistics of marriages are collected from the justices of the peace, ministers of the gospel, and all other

persons who are authorized by law to solemnize the rite of marriage. They are required by law, before marrying any persons, to have a certificate signed by a town or city clerk, where the groom resides, or in case he is a non-resident, of the town where the bride resides, or in case both are non-residents, where the marriage shall be solemnized. This certificate must be filled out, signed, and returned to the town or city clerk within ten days after the solemnization of marriage. These statistics must be tolerable correct, as this plan is very simple and easily understood by all parties concerned.

The statistics of births are collected by the school district clerks in other than in incorporated cities and villages, who are allowed a small compensation for their services, and are subject to a fine for non-fulfillment of duty. In sparcely settled districts the information collected by them will be correct in a large majority of instances, because every family is well known by the clerk. But in cities and the densely populated districts inaccuracies must arise. Illegitimate and premature still-births are very apt never to come to the knowledge of the collectors of statistics. Still-births have been known to the editor never to have been recorded, and on the other hand he has known abortions, at six weeks to three months of gestation, to be inquired after by the clerks.

The statistics of deaths are collected from two sources: by school district and city clerks, and physicians. The former are allowed a compensation for their services, but the latter have nothing, and both are liable to a fine for a neglect of duty. Attending physicians are required by law to make returns to the town clerk within fifteen days after interment. The district clerk must gather his information as in case of births, from "actual inquiry or otherwise". This information is tolerable correct, though many errors must find their way into the report. The cause of death is not always plain nor well understood by many families, and their replies to the clerk's inquiries must be more or less erroneous. The physicians' returns are presumable to be correct, though there are in many

instances, doubtless, incorrect diagnosis and corresponding inaccurate certificates of the causes of death issued. The greatest source of inaccuracy, however, is non-fulfillment of duty on the part of physicians throughout the State. Many physicians make no returns at all, thus depriving statistical science of its most important data, and there are none, who should be more interested in the study of these data than they whose duty it is to furnish them.

The editor was informed by Mr. W. H. Root, city clerk, that out of 227 deaths that occurred in the city of Burlington, in 1873, only 11 were returned according to law by attending physicians. Only two out of about twenty practicing physicians in the city made returns of deaths during that year. Of these 227 deaths 61 were reported by the census takers as having no attending physicians at the time of death. This leaves 155 deaths unreturned by attending physicians. This probably is a fair example of the neglect of duty by the physicians throughout the State. There seems to be a false delicacy on the part of medical men about having their names attached to certificates of deaths. If they would cease to boast of their cures, and study their deaths, the science of medicine would be advanced, and their patients better profited, if not more highly entertained.

The State law is not as good as it should be, and a radical change should be made; a reasonable compensation should be paid to the physician for his services, and the enactment of a law, whereby the report should be forthcoming before burial, would be advisable. A law has been drafted and will be laid before the City Council of the City of Burlington soon, that provides that no deceased person shall be buried, or taken outside of the city limits, without a certificate from a physician stating the cause of death. This law, if passed, will be operative for the securing of reliable returns from physicians, and further, such deaths as are involved in obscurity, will in this manner be opened for investigation. Such a law will have to be adopted by the State before it will secure a reliable system of registration.

Great credit is due the Secretary of State, Dr. Nichols, for the indefatigable labor bestowed upon these reports, and it is hoped that the legislature will pass some act, at its next session, whereby physicians will be made to do their duty.

Franklin County Medical Society.—The present officers of this society are as follows: S. S. Clark, of St. Albans, president; Geo. Dunsmore, .of St. Albans, permanent secretary and treasurer. Annual election is held on the second Tuesday in May, at Shelden. At the last semi-annual meeting held at Enosburgh Falls, September, 30, 1873, the following cases were reported:

Fracture, reported by Drs. Hall and Branch. A man aged 62, weight 190 pounds, of fine muscular development and apparently in perfect health, fell a distance of three feet resulting in a compound comminuted fracture of both tibia and fibula of the left leg four inches above the malleoli. From the fracture thirty-one pieces of bone were extracted, and what was most remarkable was that these fragments had all the appearance of healthy bone, presenting sharply defined edges, devoid of brittleness and affording no characteristic indications either of mollites or frigilitas ossium. There was no history of osteomalacia. There was no microscopic examination of the fragments. Amputation was, of course, the only alternative.

Adenia.—Dr. Darrah reported a case of adenia which involved not only the superficial and deep cervical, inguinal and axillary glands, but also those diffused over the entire surface of the body. The case elicits much interest both from its rarity and the obscurity of its pathology and treatment.

Tumor.—Dr. Clark presented a patient from whose neck he had twice removed what he regraded as a benign tumor but which had subsequently manifested unmistakable signs of malignancy. The right and duty of removing a benign tumor cannot and will not be questioned. Que-

ry: Did the operative interference hasten its malignant development?

White Mountain Medical Society.—This society held its fifty-third annual meeting at Wells River, Vt., on the 7th and 8th of January, 1874. Nearly forty members were present. The following officers and delegates were elected for the ensuing year: John McNab, of Woodsville, N. H., president; C. M. Tuttle, vice president; J. R. Cogswell, of Franconia, N. H., secretary; C. M. Tuttle, M. R. Woodbury, and F. T. Moffett, directors; J. R. Cogswell, G. B. Bullard, and Wm. Child, committee of assignments; Wm. Child, C. M. Tuttle, and J. R. Nelson, committee on sanitary measures; J. S. Durant, anniversary chairman; G. B. Bullard, of St. Johnsbury, and C. G. Adams, of Island Pond, delegates to the American Medical Association; Drs. Corey and Brown, delegates to the New Hampshire Medical Society; Drs. Boynton and Gove, delegates to the Vermont Medical Society; and Drs. Adams and Tuttle, delegates to the Connecticut River Valley Medical Society.

Papers.—Address by the president; Report on Normal Labor, by Dr. Palmer; Report on Instrumental Delivery, by G. B. Bullard; Report on Syphilis, by C. G. Adams; Diseases and Injuries of the Knee Joint, by Dr. Harris; Report of an Autopsy, by C. H. Boynton; and, Ozone and its Relation to Disease, by H. A. Cutting. In a discussion on our summer fevers, the so called gastric fever was considered as a distinct form, and was produced by a distinct poison.

Burlington Medical and Surgical Club.—At the regular meeting of the club on March 9th, 1874, Dr. Peck read the notes of Dr. H. H. Atwater, of five cases of

Placenta Prævia.—Case I. Mrs. J., American; second pregnancy; duration of labor, four days; complete placenta prævia, complicated with shoulder presentation; weight of child, eight pounds. Detached the placenta, and immediately delivered the child by turning.

Ante-partem hemorrhage long-continued and profuse, partially controlled by tampon; post-partem hemorrhage very slight; child still-born; mother died fourteen hours after delivery.

Case II. Mrs. P., French; third pregnancy; partial placenta prævia; edge of placenta attached to posterior lip of os; vertex presentation; weight of child eight pounds; duration of labor twenty-six hours. First hemorrhage March 7th, ceased by rest in the horizontal position; March 9th hemorrhage again; os uteri very slightly dilated; tamponed the vagina; March 10th removed tampon; no hemorrhage; March 11th hemorrhage again; plugged the vagina again; March 12th, 3 A. M., removed tampon; pains with hemorrhage; os dilated about the size of a silver dollar; gave ergot; ruptured the membranes; child born at 10.5 A. M. Still-born. Mother made slow recovery.

Case III. Mrs. M., colored; eighth pregnancy. Partial; placenta attached to one lip of os; vertex presentation; weight of child 5.5 pounds; duration of labor eighteen hours; slight previous hemorrhage, controlled by rest; natural labor; mother and child did well.

Case IV. Mrs. L., Irish; twenty-four years of age; partial; vertex presentation; weight of child seven pounds; duration of labor sixteen hours; delivered by turning; child still-born; mother died in six weeks; ante-partem hemorrhage profuse.

Case V. Mrs. K., French; twenty-three years of age; third pregnancy; complete placenta prævia, complicated with shoulder presentation; premature, at seven months; delivered by turning; child lived one half hour; ante-partem hemorrhage profuse; mother did well.

False Membrane of the Stomach.—Dr. Currier reported that in the summer of 1870, he received a specimen of false membrane of the stomach, from Dr. Patch, of Derby, which he kindly sent for microscopic examination. It was a cast of the interior of the stomach of a man who had vomited it the morning it was received. On placing it in water its form could clearly be seen, and

no doubt existed as to its origin. The following are the essential points in the history of this case as obtained from private conversation with both the doctor and his patient:

Mr. M., aged about sixty, a painter, had for some time previous been affected with what was considered dyspeptic symptoms, but was daily at his work. One morning he got up quite early, preparatory to making a visit some miles away, and ate a breakfast of bread and milk. While he was harnessing his horse he felt some nausea, and soon vomited. His attention was directed to the ejected matters, when he discovered this membranous substance, and as he had eaten no meat that morning he had curiosity to know what it was, and saved it to show to his physician, but in his endeavor to secure it tore it in two places, which were easily distinguished when the membrane was unfolded under water. He soon felt some prostration and went into the house, giving up his intended journey. He soon recovered from his gastric disturbance, and was able to resume his labors in a few days. He said he was better than he had been for several months.

Being very busy at the time of receiving this specimen it was put into dilute alcohol, only a hurried examination being made with a low power by him, and when he went to it a few days after to make a thorough examination it had become entirely disintegrated, and settled to the bottom of the bottle as a flocculent mass. The rough examination however showed it to be of a homogeneous structure. Could this membrane be the result of gastritis or simply of sudden portal congestion? Had it been the latter, the intestines might have suffered similarly, though the breakfast acted as a special irritant to the stomach.

Connecticut River Valley Medical Association.—The present officers of this association are as follows: D. W. Hazelton, of Cavendish, Vt., president; W. R. Dunham, of Westmorland, N. H., vice president; E. H. Pettengill, of Saxton's River, Vt., record-

ing secretary; A. P. Richardson, of Walpole, N. H., corresponding secretary.

The annual meeting for election of officers is held at Bellows Falls, on the first Wednesday of May of each year. There are two other meetings during the year, one on the first Wednesday of July, and the other on the last Wednesday of October. The society numbers about one hundred members.

Chittenden County Medical Society.—Regular meeting at Essex Junction, January 13, 1874.

Typhoid Fever.—J. F. Miles in making some observations on typhoid fever remarked that the disease does not occur in the vicinity of Hinesburgh, but that it is very common in Huntington and Starksboro. In the treatment of that disease he excludes all animal food and broths, for the reason of their irritating the intestinal canal, and by their decomposition add to the poison already in the system. He employs milk with lime-water for nourishment, and for tonics relies upon Peruvian bark and sage.

J. O. Crampton related an instance where he attended several in the same family sick with typhoid fever, and he referred the cause of the disease to impure water, and filthy surroundings.

St. Albans Village Medical Association.—The present officers of this association are: John Branch, president; S. S. Clark, secretary. Regular meetings are held on the first Monday evening of each month.

Donation.—Dr. M. Goldsmith of Rutland has very generously donated his pathological museum to the Medical Department of the University of Vermont, and it is now being arranged at their laboratory.

Malpractice Suit.—Suits for malpractice are somewhat fashionable in Vermont. Recently prosecutions were commenced against a worthy and competent practi-

tioner in this State for alleged damages in the treatment of a fractured thigh. Proof comes quite direct that the suit was brought to avoid paying the surgeon for his services, being urged on by the intermeddling of a neighboring practitioner, and by a lean attorney-at-law who was glad of any kind of a job to make an array on the next docket.

Lichens.—A Catalogue of the Lichens of Vermont, by C. C. Frost, is now being published in the first volume of the *Archives of Science*, issued at this office. This list has been revised by Prof. Edw. Tuckerman of Amherst, and may be considered the only authentic one published.

For Sale.—A large collection of American and foreign medical peiodicals is offered for sale. Sold in parts or otherwise, to suit the purchaser. Address the publisher.

OBITUARY.

Dr. David M. Merrill was the son of the Rev. David Merrill of Peacham, Vt., who was pastor of the Congregational Church in that town for twelve years and died in that charge in 1849. Dr. Merrill was left penniless with a widowed mother and four sisters, at the age of eight years. There being a first-class academy at Peacham he received a first-class primary education and was intending to enter college in a year, when the late war broke out, which so fired him for his country that he enlisted in the Sixth Regiment of Vermont Volunteers, and served until the war ended. The close of the war found him in broken down health, and he gave up entering college and decided to study medicine. He commenced his studies with Dr. L. F. Parker of Peacham, and attended his first course of lectures at Burlington

in the year of 1867. He afterwards pursued his studies with the late Dr. Selim Newell of St. Johnsbury, and attended his last course of lectures at Harvard Medical College at Boston in the Winter of 1868-9, graduating in the March following, with honor. He returned to Peacham the same spring and commenced the practice of his profession in his native town. The following fall he married Miss. Elsa A. Choate, daughter of the Hon. David W. Choate of Peacham, a most estimable lady who survives him to mourn his loss.

As "a prophet receiveth honor save in his own country," so Dr. Merrill's success was not great in Peacham, and in 1870 he removed to St. Johnsbury and entered into partnership with his old preceptor and friend, Dr. Newell, which continued until Dr. Newell's death. The symptons of that fell destroyer, consumption, had begun to show themselves before Dr. Newell's death, and he soon followed him to a premature grave, departing peacefully on the 28th day of March, 1872, aged 32. The writer of this sketch was with him in consultation when the first fearful hemorrhage seized him, and he remarked that he feared it was "all up" with him, but still he had strong hopes of recovery to the last, going South, and consulting many eminent physicians, but yet, that was his last days work. Dr. Merrill's success in St. Johnsbury was very great considering his years and surroundings. He was genial and pleasing in the sick room, was active, and devoted to his profession, was a kind and honorable brother practitioner, never stealing his neighbor's patients. He gave great promise for the future, and a large circle of friends both out and in the profession mourn his early death.

G. B. BULLARD.

BIBLIOGRAPHICAL NOTICES.

The German Pharmacopœia.—Translated by C. L. Lochman. pp 382. David D. Elder & Co. Philadelphia. This work has recently taken the place of the various Pharmacopœias of the

German States, being the only legally recognized Pharmacopœia for the whole German empire. English and German synonyms are given under each article. Tables of the various weights and measures are appended.

Diseases of the Ear.—By Dr. A. D Williams. pp 290. Published by Robert Clarke & Co., Cincinnati. Dr. William's work is a concise text book upon the subject under consideration. Each disease is treated in a concise and practical manner. Very few cases are brought forward to illustrate either the disease or treatment adopted. He relies very largely upon his own experience all through the work. It is decidedly a sufficient guide for the practitioner. Typographically it it a beautiful work.

Transactions of the American Medical Association, Vol. 24, 1873. *pp* 446. The following are the most important papers: The president's (Dr. Logan) address; report of the section on the practice of medicine and obstetrics; on the granular cell found in ovarian fluid by Thos. M. Drysdale; education of the medical senses by Edward Seguin; report of the section on surgery and anatomy; new aparatus for the treatment of bunion by Chas. H. Lathrop; report on the climatology and epidemics of Pennsylvania by W. L. Wells; and statistics of regular medical associations and hospitals of the United States by J. M. Toner.

Clinical Reports from Private Practice.—By Dr. J. H. Claiborne. pp 424. Published by Jos. Van Holt Nash, Petersburgh, Va. This is a promiscuous gathering of notes upon many diseases. When the busy practitioner has cured all his patients, and is leisurly smoking his cigar, waiting for another call, he will enjoy perusing the work of John Herbert Claiborne, A. M., M. D., *one* of the vice presidents of the Medical Society of Virginia. Should his cigar go out there is plenty of blank paper at the top or bottom of any page to re-light it. However, we admire the doctor's plan of taking notes in cases, and contributing something to medical literature.

Physician's Visiting List for 1874. By Lindsay & Blakiston, Philadelphia, Pa.

The Physician's Daily Pocket Record. By Dr. S. W. Butler, Philadelphia, Pa.

MARRIAGE.

Bruce—Tilson.—At Braintree, Vt., Thursday, Jan. 1st, 1874, by Rev. Elbridge Gerry, Martin Bruce, M. D., of Brattleboro, Vt., to Miss. Nancy J. Tilson, of Braintree, Vt.

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